IN JAVA AND THE EAST INDIES

We shall see the most beautiful lands on earth, with primitive peoples living close to the rich soil and learning the lessons of the white man's civilization.

CARPENTER'S WORLD TRAVELS

JAVA AND THE EAST INDIES

Java, Sumatra, Celebes, The Moluccas, New Guinea, Borneo, and the Malay Peninsula

BY

FRANK G. CARPENTER
LITT.D., F.R.G.S.

WITH 125 ILLUSTRATIONS
FROM ORIGINAL PHOTOGRAPHS
AND TWO MAPS IN COLOUR

GARDEN CITY NEW YORK
DOUBLEDAY, PAGE & COMPANY
1925

COPYRIGHT, 1923, BY
FRANK G. CARPENTER

ALL RIGHTS RESERVED

PRINTED IN THE UNITED STATES
AT
THE COUNTRY LIFE PRESS, GARDEN CITY, N. Y.

ACKNOWLEDGMENTS

IN THE publication of this volume on Java, the Malay Peninsula and the islands of the East Indies I wish to thank the Secretary of State for letters which have given me the assistance of our official representatives in the countries visited. I thank also our Secretary of Agriculture and our Secretary of Labour for appointing me an Honorary Commissioner of their Departments in foreign lands. Their credentials have been of great value, making accessible sources of information seldom opened to the ordinary traveller. To the Dutch and British authorities in the regions covered by these travels I desire to express my thanks for exceptional courtesies which have greatly aided my investigations.

I would also thank Mr. Dudley Harmon, my editor, and Miss Ellen McBryde Brown and Miss Josephine Lehmann my associate editors, for their assistance and coöperation in the revision of notes dictated or penned by me on the ground.

While most of the illustrations in Carpenter's World Travels were made from my own photographs, they have here been supplemented by some from the Smithsonian Institution and from Mr. Stanley K. Hornbeck of our State Department; and others from the Keystone View Company, the Publishers' Photo Service, the International News Reel, and Brown Brothers, which are fully protected by copyright.

F. G. C.

TABLE OF CONTENTS

CHAPTER		PAGE
I	Just a Word Before We Start	1
II	In Old Batavia	3
III	A Day at Weltevreden	11
IV	Dutch Rule in the East Indies	18
V	How Java Paid Its Way	26
VI	On a Big Tea Plantation	31
VII	The Netherlands India Army	41
VIII	In and About Bandong	48
IX	How Quinine is Produced	59
X	Across Java by Rail	70
XI	In the Rice Fields	76
XII	The Initiation of a Prince	81
XIII	Within the Sultan's Palace City	88
XIV	The Women of Java	94
XV	The Shrine of a Thousand Buddhas	104
XVI	The Sultan of Solo	116
XVII	On the Coffee Estates	128
XVIII	Volcanoes of the Land of Fire	136
XIX	The Sand Sea and the Bromo	142
XX	Surabaya, the Sugar Centre	148
XXI	Colonial Life in the Dutch East Indies	157
XXII	Cruising Through the Sunda Sea	168

TABLE OF CONTENTS

CHAPTER		PAGE
XXIII	The Rajah of Lombok as Tax Collector	174
XXIV	Celebes and the Moluccas	179
XXV	The Home of Birds of Paradise	183
XXVI	Tattooed Débutantes and Wasp-Waisted Men	192
XXVII	Borneo, an Outpost of Colonization	202
XXVIII	The Head-Hunting Dyaks	212
XXIX	About Sumatra	222
XXX	Singapore, a Gateway of the Orient	235
XXXI	Chinese Workers and Malay Drones	246
XXXII	John Bull in Malaya	257
XXXIII	The Sultan of Johore	263
	Bibliography	269
	Index	275

LIST OF ILLUSTRATIONS

In Java and the East Indies . . . . . *Frontispiece*

FACING PAGE

Approach to a beautiful home 2
The Java Bank 3
The harbour of Tandjong Priok 3
Along the waterfront of Old Batavia 6
Bathing in the Batavia Canal 7
Sidewalk bazaars 14
The best fruits of the world 15
Javanese luncheon parties 15
In the hill country 18
The palace of the Governor General 19
Women in a rice field 22
In the Botanical Gardens 23
One of the administration buildings 30
The giant lotus 30
Tea plants on a hillside 31
Home of the manager of Malabar. 31
Picking tea 38
Ancient gateway of Batavia 39
A native school 46
Javanese women and child 47
A glimpse of a native village 54
A native signal drum 55
Where the cinchona trees are set out 62
A plantation manager 63
Gathering the bark of the quinine tree 66

LIST OF ILLUSTRATIONS

FACING PAGE

Preparing bark for the quinine factory 67
A typical field in Java 70
Irrigation works 71
On a railroad in Java 71
Ploughing the rice field 78
A sacrifice to the rice goddess 78
Rice field under water 79
Primitive methods of rice culture 79
The royal swimming pool 82
The Sultan's son 83
Old Mosque at Kudus 83
The ancient Water Castle 86
Javanese theatre 86
The native regent 87
Waringens, the trees of the nobility 94
Native refreshment stand 94
Rice shoots for transplanting 95
Women's work in the wet fields 95
Pounding rice 98
Making batik 99
The commercialized batik work 99
The metal worker 102
Irrigating the fields 103
Boro Budur 110
The lattice-work shrines 111
Three miles of bas-reliefs 111
Stairway at Boro Budur 114
Chinese temple 115
The Sultan's guard 118
The Sultan and his "Elder Brother" 118
Masked actors 119

LIST OF ILLUSTRATIONS

FACING PAGE

The delicious mangosteen 126
The fishermen 127
Javanese artisans 127
Coffee picking 130
A plantation in the hills 131
Bringing in the harvest 131
Drying the coffee berries 134
Water buffaloes 135
Mount Smeru 142
The rim of the crater 143
Homes of the mountain dwellers 143
The sea of sand 146
The fish pond 146
In the crater of Papandayang 147
The coconut sellers 147
Canal boat at Surabaya 150
In the sugar field 151
In the highlands at Garut 158
Javanese pillow stuffing 159
Home of a Dutch Resident 162
Native cart and bullock 162
Making music at harvest 163
Bamboo 166
Funeral of a priest 167
Cattle fair 167
A temple in Bali. 174
A native boat 175
Funeral procession 175
Prehistoric stone image 178
A savage at work 178
A suspension bridge of rattan 179

LIST OF ILLUSTRATIONS

FACING PAGE

Making a canoe 182
Hunting fish with bow and arrow 183
House in the trees 190
Barracks in New Guinea 191
Penetrating the interior 191
Tattooed woman 194
In need of a trim 195
Papuan warrior 198
The duk-duk dance 199
Natives in full regalia 199
A village on piles 206
Mosque of Negara 207
Floating timber down the stream 207
A Borneo belle 210
Highways of trade 211
The mission school 211
A young head-hunter 214
Growing tobacco in Sumatra 215
Home of a colonist 215
A scene in Sumatra 222
Teeth before filing 223
Teeth after filing 223
Tobacco a money-maker 230
Natives learning to play football 231
The horned house of Padang 231
Boatman at Singapore 238
On the docks. 239
Rattan 239
Where the automobile tire begins 242
Malay boy and his boat 243
Craft in Singapore River 243

LIST OF ILLUSTRATIONS

FACING PAGE

Chinese shop 246
Mining tin 247
Mr. Carpenter and Malay 254
Coolies hauling timber 255
Chinese cemetery 255
In the jungle 258
Elephants at the river 259
Street in Penang 259
Carrying water in bamboo 266
Drying copra 267

MAPS

Java 26
Java and the East Indies 42

JAVA AND THE EAST INDIES

JAVA AND THE EAST INDIES

CHAPTER I

JUST A WORD BEFORE WE START

IN BEGINNING our travels in these far-away lands I shall ask you to imagine ourselves connected by a radio so strong that it will carry a whisper halfway round the globe. You are comfortably seated in your own home, and I am on the other side of the world. My exact location is Batavia, a hundred miles or so south of the Equator, and the chief port of the beautiful island of Java. You can almost hear the rustling of the coconut palms over my head as their long leaves sway to and fro under the winds of the tropical sea.

I came here on a tramp steamer from Australia, cruising in and out of the many islands of the Dutch East Indies which lie on the way. I am now fifteen hundred miles from Manila, by the ships which skirt the western coast of the great island of Borneo and call at Singapore, from where there are regular sailings to Java. I am five hundred miles east of the Malay Peninsula, the southernmost tip of eastern Asia, and something like two thousand miles west of New Guinea, which almost touches Australia. As I look to the northeast I am facing Celebes and the Moluccas, where Magellan's sailors stopped to load their vessels with spices on the first trip ever made round the globe, and west of me is Sumatra,

whose coffee and tobacco have long surpassed those of Java in our American markets. All of these places we shall see in our travels.

In fact, we are to visit the remains of a continent. The East Indies are the peaks and plateaus of mountains, the high spots of a great body of land most of which has been long since submerged in the ocean. This land ran all the way from Australia to Asia, covering a distance as far as from New York to London, and the islands now form giant stepping-stones, as it were, from one continent to the other.

This is the world we are to explore. It is a most interesting world—a world bisected by the Equator where nature runs riot and man may be seen in almost every stage of civilization. It is a world of history, of peoples of the past, who have left monuments that are the wonders of the present. We shall travel in the footsteps of the Buddhists and the Mohammedans and see heathen as debased as any in the wilds of Africa. We shall find the lands changing, and the peoples improving. The railway has already conquered Malaya and Java, and the schools of the West are to be found in the towns. New resources are being discovered, and new industries are developing the various countries. Our automobiles for the most part run on rubber raised in Malaya, and the bulk of our tin is from the islands of Banka and Billiton and from the Malay Peninsula. The petroleum of Borneo and Sumatra competes with ours in the markets of Asia, and new industrial developments are expected in New Guinea, so much of which has come, through the World War, under the mandate of Australia.

The homes of the wealthy stand in huge gardens, and are approached through beautiful drives shaded by royal palms and other trees of the tropics. The excellent roads invite the motorist, and thousands of bicycles are in daily use.

The Java Bank at Batavia is the chief financial institution of the Dutch East Indies. It was established in 1828, is controlled in part by the government, and is a most important factor in colonial development.

Since earliest times Java has been an important point on the water routes of the East, and to-day the modernized harbour of Tandjong Priok, port of Batavia, is filled with vessels from all parts of the world.

CHAPTER II

IN OLD BATAVIA

THE Dutch East Indies form a vast archipelago lying on both sides of the Equator just south of the Philippine Islands, and their inhabitants have many of the characteristics of our Filipinos. Some of the islands have been governed by Dutch officials for centuries. They have been the scenes of all sorts of colonial experiments, into some of which other nations, our own among them, might look with advantage.

The little country of Holland is scarcely a freckle on the broad face of Europe. The Dutch East Indies are a big patch on that of the South Pacific Ocean. In them, Holland has a territory fifty-five times as large as herself. These islands are one fifth the size of the United States, including Alaska. They are so large that you could put our Atlantic states and also Ohio, Indiana, Kentucky, Tennessee, and Mississippi in them and have room to spare. They support nearly fifty million people, or more than seven times the population of the Netherlands. They have as many inhabitants as the United States had in 1880. Java is the most populous large island on the globe. It has seven hundred and ten to the square mile, or a density exceeding that of crowded Holland itself.

The Netherlands East Indies, to give the official name, have islands that are principalities in themselves. Take Sumatra, the soil of which is as fat as that of the Nile val-

ley, and which has petroleum and other mineral resources. That island is longer than the distance from New York to Chicago and as wide as from Boston to Washington. It is larger than any state of the Union except Texas, and as it lies next to Singapore, is on one of the chief trade routes of the world. In Borneo, which is just beginning to be developed, the Dutch own more land than all New England added to New Jersey, Pennsylvania, and Ohio. Their territory in New Guinea is nearly as large as California, and in Celebes there is twice as much land as in Indiana. The Timor Archipelago, through which my steamer passed in going from Torres Strait to Batavia, has an area twice that of Massachusetts, and in that journey, which lasted two weeks, I was seldom out of sight of islands owned by the Dutch. If you will look at the map you will see that they spot the Indian Ocean like stepping stones on a straight path as long as from New York to Salt Lake City, all the way from southern Asia to beyond Australia.

Most of the islands which I have just mentioned are comparatively undeveloped. They are inhabited chiefly by savages, and no one knows exactly what they are worth. It is different with Java where these notes are written. This is the administrative centre of Asiatic Holland, and the place where the Dutch have made their most important colonial experiments. They had possession of it when Shakespeare was yet living, and they have been ruling it so ably that it is now the finest garden of the tropics, the Switzerland of the Pacific, and the wonder of the world in its colonial management.

Think of an island only as large as the state of New York which is supporting comfortably almost one third as many

people as the whole United States. That is Java. It is over six hundred and sixty miles long and from fifty to one hundred and twenty-five miles wide, but it has a larger population than all the rest of the archipelago of which it forms a part. It is about as big as Luzon or Mindanao in the Philippines, and its soil is of much the same character. I have already travelled all over it, and I have yet to meet a native who looks hungry. The country is feeding itself, and in addition is sending away millions of dollars' worth of its products every year. It is not only yielding a living to the natives, but making fortunes for Dutch capitalists. The island is covered with plantations of sugar, coffee, and quinine, which represent an enormous investment of Dutch guilders. Indeed it is estimated that more than four fifths of the country is being farmed, and a trip through it will convince any one that the rest is being rapidly prepared for cultivation. With about 7 per cent. of the area of the Archipelago, Java has most of the cultivated lands and over 72 per cent. of the population of Netherlands India.

That this is so is due to the control of the island by one master after another, none of whom allowed the natives to be idle. Lying as it does in the track of all the regular winds of the Pacific and Indian oceans, Java was from the earliest times the objective point of sailing routes and migrations. Malays, Chinese, and Hindoos held sway until the thirteenth century of our era. Then came the Arabs with their Mohammedanism, followed by the Portuguese in the fifteenth century and the Dutch at the close of the sixteenth. Both of the latter were after a monopoly of the immensely profitable trade in pepper and

other spices. The Hindoos taught the natives rice-culture, which requires irrigation and much patient toil, and the Arabs, the Portuguese, and the Dutchmen carried on the tradition of hard work, thus building up dividends for themselves and incidentally promoting the prosperity and population of the Javanese.

The Java of to-day is a land of railroads, telegraphs, and schools. One can get as good an education here in Batavia as in the average American city. I can telephone from the hotel where I am stopping to cities and villages all over the island, including Surabaya, which is as far away as Washington is from Cleveland. I could go on a bicycle or in an automobile through every part of Java, as the Dutch have built some of the best roads of the world, and that notwithstanding tropical floods and other difficulties such as we have found in the Philippines.

Batavia, where this chapter is written, is the capital of Java. It is the largest city of Asiatic Holland, and one of the oldest of the European settlements of the Far East. Founded when Peregrine White, the first white baby born in New England, was squalling in its cradle at Plymouth, it is now about as large as Toledo, Ohio, with a vast population of natives in the country about.

Batavia is situated at the eastern end of the island, at the mouth of the Tjiliwong River, and not far from the harbour of Tandjong Priok, with which it is connected by railroad and canal. I landed at this harbour and was quickly passed through the customs and came to Batavia in about half an hour by rail.

The town consists of two parts, a lower and an upper. The lower, comprising the chief exporting and importing

With its canals and white-walled, red-roofed houses, lower Batavia looks much like a town in Holland. Here were the first settlements, but officials and foreigners now live at Weltevreden, the new city farther inland.

The Javanese bathe night and morning, and the favourite place for the natives at Weltevreden is in the Batavia Canal. The family wash is done at the foot of the steps leading down into the water.

houses and all the old buildings, is not unlike a city of Holland. A wide canal runs through the principal street and the houses along this have white walls and steep overhanging roofs of red tiles. They remind one of the buildings in parts of Rotterdam and The Hague, and with their Dutch signs and Dutch merchants, would not be out of place if lifted up bodily and dropped down in the Netherlands.

At first the Dutch made the mistake of trying to live in the tropics as they had done at home. In Old Batavia they built a town of tight Dutch houses set close together along the canals needed for draining the low-lying land. Moreover, they surrounded the city with a great wall, which kept out the fresh, health-giving breezes. Over a million deaths were recorded in Batavia alone between 1731 and 1752. During the brief period of Napoleon's rule over Holland and its colonial empire, one Marshal Daendals, a Dutchman in political disgrace at home, was Governor-General of Netherlands India for the French. He was harsh and cruel, but efficient. He saw the causes of the unhealthful state of the city, pulled down the wall, and removed the garrison from the old town to a new camp on high ground. That was the beginning of modern Batavia, or Weltevreden, the great residential city of the Dutch in the East Indies. The old, unsanitary town in the low grounds was left to the Chinese, the Arabs, and the natives, who largely occupy it to this day. The government public health service has done much to improve its sanitation.

One of the interesting landmarks in the lower town is an ancient brass cannon, half buried in the mud beside the old town gateway. This is the Si Jagoer, about which a

number of native superstitions have grown up. One is that some day the old gun will join its mate at Surabaya and then Dutch rule will end in Java. Another is that Si Jagoer has power to give children to the childless; so there is a constant procession of women burning incense sticks and placing their offerings on the mounds of earth close by.

From Old Batavia a wide road runs for four miles along the canal to Weltevreden, which deserves its name, meaning "Well Content." The waterway and the highway are lined on both sides with houses. Weltevreden is one of the most beautiful cities in the world. It is an immense park in which not only the homes of the people but even the stores and the business buildings have gardens and tropical trees about them. There are public squares containing hundreds of acres, there are great avenues of palms, huge collections of orchids and beautiful flowers, and all the surroundings of fairyland.

Take the King's Plain, for instance. This is a tract a mile square, almost in the centre of the city. It contains more than five hundred acres and is one vast stretch of lawn. It has but few trees and at first one wonders why it has not been turned into a regular park. But its bareness is its best feature, for it forms a great breathing space for the city, across which the wind blows unobstructed and the absence of vegetation ensures a wholesome dryness in a region of moisture.

There are roads around the King's Plain as smooth as those of Central Park, and back of them, looking out through the trees, are the villas of the nabobs of this Dutch capital. Each has a garden containing so many

curious plants that it would be a veritable botanical exposition anywhere else. Here the driveway up to a house is between two rows of royal palms, and there it is under an arbour of shade trees so gigantic that you will not see their like outside of Java.

The houses are generally of classic Greek architecture married to the red tiling of the Dutch roofs. They are painted white to represent marble, and each has a great veranda upheld by columns. The people sit on the verandas, but the rooms within are so large and airy that they seem quite as cool. Most of the houses are floored with stone. Very few of them are of more than one story, but they are spread wide over the ground. Some have smaller houses away from the main building and reached by covered ways. These are guest houses, so placed that the visitors may enjoy quarters entirely to themselves and be independent of their hosts except at meals.

I wish I could show you how some of these Dutch live away down here among the so-called savages on islands that straddle the Equator. I venture if you could see their homes many of you would want to come to the South Seas and build others like them. Their gardens are better than those of any millionaire in the United States, and our President with his White House conservatories has no flowers equal to those I see here.

There is no lack of furniture. The stores of Weltevreden are supplied from the best establishments of Holland, and the people can buy every luxury in the way of books, paintings, and objects of art. All sorts of food made in Europe are sold, and the country raises vegetables and fruits of every description. One gets much for his money, but nevertheless it costs a great deal to live. Every one

spends up to his income and many a little beyond it. The Dutch gentlemen on the average dress better than our people at home. They are sticklers for etiquette, and one scarcely dares go out to dinner unless he has on dress clothes.

CHAPTER III

A DAY AT WELTEVREDEN

THE little brown people of Java are the most lovable of all coloured races outside of Japan. They are swarming about me as I make these notes under the shade of the palm trees. My seat looks out on the wide canal which runs through Weltevreden. The canal is walled with brick, but at every few feet there are stone steps leading down into the water, and in each of these places Javanese girls are standing waist-deep in the water washing themselves or their clothes. They are a cleanly people. Every Javanese takes his bath night and morning, and the bright cottons they wear are frequently scoured. The girls down there in the water have bag-like skirts, or *sarongs*, wrapped tightly about their plump bodies just under the arms, and their shoulders show rich golden brown as they bend down at their work. The wet *sarongs* cling to their forms like the traditional paper on the wall, and they look like brown statues with the lightest of draping. Notice how their shoulders bob up and down as they rub the clothes on the stones. There is one turning around. She is wringing out her washing, and here is another holding a wet garment high in the air and bringing it down with a slap on the steps to get the dirt out.

See the men and the women swimming about. There are scores of them bathing together, all dressed in these

thin cotton *sarongs*. There are grandmothers and granddaughters, old men and young men, children and babies, the latter being dipped in and out of the water by their mothers.

Here come two girls of sixteen for their daily swim in the warm flowing stream. They are well dressed, after the Javanese style, each wearing a long cotton jacket over the *sarong*, and each carrying another *sarong* with her to use in the bath. Now they have stopped on the bank within twenty feet of where I am writing. They are letting down their hair. It is long, blue-black, and shining. Javanese women are proud of their luxuriant hair. See! Each girl is twisting it up in a knot and fastening it tight to the top of her head, so that it may not impede her while swimming. Now they take off their jackets and hold up the *sarongs* they have brought with them. These are bags of figured cotton open at top and bottom and a yard wide and two yards long. Each girl steps inside one and pulls it up under her arms and at the same time allows her dress *sarong* to drop to her feet. She is now penned in, as it were, in this wide bag, with her arms and shoulders exposed. She pulls the bag close to her person, twisting it this way and that to tighten it, and fastens it in a knot at the breast. Folding up her other dress and laying it with the jacket in a neat pile on the bank, she jumps into the stream. Her sister has followed, and the two are paddling about like two little brown ducks. They swim this way and that. Now you see only their heads and now only the soles of their little brown feet.

They stand in the canal and scour themselves, and after a long time spent in sporting about, walk up the steps, two dripping Venuses. I am interested in watching them

get out of their wet dresses and into the dry ones, which they do in the bright light of this tropical sun without the least exposure of person. They are modest withal and as innocent as the little baby on the porch over there, sitting astride the hips of her twelve-year-old mother and staring at me.

The Javanese cannot be said to be beautiful. They are about as tall as the Japanese, their average height being a little more than five feet. Both sexes are plump and well shaped and exceedingly straight. They have slender limbs, small wrists and ankles, and long, slender fingers. They look not unlike the Filipinos, save that their foreheads are, if anything, higher, and they are of a more pronounced Malay type. Many of them have high cheek-bones and their eyes are a trifle aslant, making one think of the Chinese. Their lips are thick, although not nearly so thick as those of Negroes.

As a rule, the women are not as good looking as the men, though many of the young girls are pretty. The women of the better classes are often fine looking, having high, narrow foreheads, fairly good noses, and luscious red lips. They are particular as to matters of etiquette, and are universally polite and well-behaved. This is true of both sexes.

I am stopping at the Hotel des Indes, one of the largest in the Far East and by all odds the largest in the Dutch East Indies. It is situated on the right side of the canal on the edge of Weltevreden as one comes up from Batavia. It has something like ten acres of gardens, all shaded by magnificent trees. In front of the veranda is a banyan tree spreading over a space equal to that of a large city lot, while from my room I look out upon palms and other

trees. The house consists of two long rows of rooms opening out on arcades, or cloisters, on each side, with a lounge and dining room and offices at the back. I don't know how many rooms there are, but they must number hundreds, and all are on the first floor. I have two communicating rooms and I also use the paved court before my door. There I loaf in my pajamas and bare feet from daybreak until 8 or 9 o'clock in the morning, and again after my afternoon nap, from 3 until 6. I am by no means the only barefooted, lightly clad guest. There is a woman next door who wears only a thin loose gown and toe slippers without stockings, except when she is dressed for calling or company. I see her and her husband trotting by every morning and evening in their bare feet, each carrying a towel, on their way to the bath, and they eat beside me in much the same costume, except at dinner.

I don't know that I like the Dutch meals. There is plenty of food, but the way of serving it is so strange that I fear for my liver. As soon as I awake in the morning my boy brings me a cup of coffee. This I am expected to take in my room or on the pavement outside. I can have it as early as five o'clock, and even at that hour I always find others being served. The coffee here is not the hot, steaming drink we have at home, but a syrupy extract, served cold. The boy puts a spoonful or two into my cup, fills it up with hot milk, and then I am supposed to drink it. He gives me a couple of lumps of sugar, but no bread or toast or anything solid.

The next meal is *ontbijt.* You need not pronounce it: it merely means breakfast, and consists of cold meat and fruit, with perhaps soft-boiled eggs, which always come on half cold. The next meal is *rijsttafel,* or rice table.

The sidewalk bazaars sell everything, from food cooked by bare-legged Javanese while you wait to the mats of woven bamboo which the natives use to make walls for their houses.

No more delicious fruits grow anywhere in the world than those of Java. Peddlers sell them from baskets slung from the ends of a pole and carried on their neck and shoulders.

The rice-table of the Europeans has its equal in the native ceremonial feasts held on the slightest excuse. As with the modern débutante, the life of the Javanese is just one luncheon party after another.

This corresponds to our luncheon. It is made up of a mixture of rice and every conceivable meat and vegetable under the sun. I am expected to half-fill a soup plate with rice, pile the other things on top, and then stir the whole together and shovel it in until the vacant space in my anatomy is filled.

I can better describe the famous rice table by telling you what one slender Dutch girl, who sat beside me to-day, consumed at this meal. As she came in to the table I could see the outlines of her form plainly through her thin jacket and calico *sarong*, which the ladies here consider enough except on dress occasions. Had I dared look I might, I doubt not, have seen her, as Sam Weller's father said of the women at his wife's tea party, "swelling wisibly before my wery eyes." She took the whole course, and I made a memorandum of the dishes on a visiting card on the other side of my plate as she did so. First came the rice. Her ladyship gouged out a quart of the flaky white grains with the short-handled silver trowel provided for the purpose, and then smeared two spoonfuls of curry upon it. The next waiter brought forth a pyramid of sausages, and my lady took a couple of them and some of the gravy. She added a leg and a second joint of broiled chicken, and took from another waiter some green peppers and meat cut fine. Some fried eggs followed, and then hashed beef, fried bananas, and fried fish. The plate was now pretty well filled, but Mademoiselle mixed the rice, hash, and other things, and sat back until the rest of the food was brought on. This consisted of olives, pickled eggs stuffed with peppers, shaved beef stewed, raw cucumbers, and one or two other things, the names of which I did not know. There must have

been a dozen different kinds of food mixed up in her rice. When she had smoothed the pile it looked like a Chinese grave. She ate the whole with a fork and a tablespoon, working the two together to convey the food to her mouth. There were others about her doing likewise, and, strange to say, none seemed to suffer inconvenience.

After this course there was one of beefsteak, cooked in American style, and a dessert of bananas, cheese, and coffee. The bananas and cheese were eaten together in alternate bites, and the coffee was just like that I had had for breakfast. No wonder that after such a meal all Weltevreden takes a three-hour nap.

By seven or eight o'clock, however, the city has revived and is ready for its evening amusements, dancing, calling, or attending concerts. There are two high-class clubs, each of which has several hundred members. Both have houses which would be considered fine in New York or Washington, and one of these, the Concordia, has a great garden where every Saturday night its members give a concert to their families and friends. The music, which is furnished by one of the military bands, is as good as one hears at like places in Europe.

Last Saturday night the band played on a stand in the open air, while the audience was seated about the tables in the tropical garden in front of the clubhouse. The light was furnished by hundreds of white-globed electric lamps hanging from the trees, and by the rays of the full moon filtering through the green palms. There were, I judge, at least a thousand guests present, and as we sat there chatting and drinking, stately native waiters in turbans and livery slipped noiselessly about on bare feet. With the exception of the military officers, who were clad

in white duck with gold lace and brass buttons, the men wore black clothes and the women stylish hats and well-fitting gowns.

In the intervals I walked through the club house. It is floored with Italian marble, and parts of it are walled with great mirrors. It has a library and newspaper room, a large billiard room, halls for dancing and card playing, and all the conveniences of the best clubs the world over. Another evening I spent at the Harmonie Club, where the music was equally good.

CHAPTER IV

DUTCH RULE IN THE EAST INDIES

I SPENT an hour at Buitenzorg this morning with the Governor-General of the Dutch East Indies. His title gives but a small idea of his state and the extent of his power. He is a veritable king, and he has more authority over his subjects than any monarch of Europe. He rules forty-seven million people scattered over a territory more than three times as big as Germany or France and larger than any country in Europe except Russia. He has thousands of officials under him, and commands a standing army of thirty-six thousand, which is entirely independent of the Dutch home forces.

The Governor-General lives in much style here at Buitenzorg, the so-called "country capital" of Java, which is forty miles from Batavia. His salary is $55,000 a year, and he is allowed a large sum for travelling and other expenses. His palace, which is five times as big as the White House, is situated in a great park, a part of which contains the wonderful botanical gardens. It was in the palace that I met His Excellency. The audience was held in the morning, but notwithstanding this I had to go in full dress and in as much state as though to visit a king. I was met at the palace door by soldiers and officials in uniform, and His Excellency's secretaries passed me from one to another until I was at last ushered into the audience room of the Governor.

From Batavia and Weltevreden the Europeans go up to Buitenzorg, the country capital, located twenty miles inland. From the "Leafy Hill" there are beautiful views of the two great volcanoes, Gede and Salak.

The Governor General of the Dutch East Indies rules more than 47,000,000 people and has more power than any monarch of Europe. He lives in a palace at Buitenzorg situated in the midst of the famous Botanical Gardens.

He addressed me in English and we chatted together for some time about the Dutch colonial empire and how matters are handled in Java. He explained the Dutch methods of dealing with the natives and said they were necessary to make them contented and happy. Upon my leaving he gave me notes to some of his subordinates, and promised to have forwarded to me a general letter to the resident governors of the various provinces, the officers of the military forces, and others in all parts of the islands, directing them to aid me in my investigations in every way possible.

The Governor-General and his council of five members are appointed for a five-year term by the Dutch Crown. A few years ago the Volksraad, or People's Council, was created to discuss the budget and to advise the government on matters of general welfare. This is considered a first step toward the development of self-government in the colony. It consists of a president, fifteen natives, and twenty-three Europeans and foreign Orientals, that is, Chinese and Arabs. Of these some are appointed by the government while the rest are chosen by the local councils.

The civil service of the Dutch East Indies is the most remarkable in the world. I know of no colony where the officials are so well educated and of such a high standing in every respect. The system is based upon the native government, the native nobles and chiefs ruling the people by their own laws, with the Dutch as advisers behind them. But the native rulers are merely the tools in the hands of the Dutch; they are the strings which the latter pull to influence the people. In Java, which, as I have said, is as large as New York, there are a number of provinces or

residencies. Each of these has its native governor, assisted by a Dutch Resident, who is known as his elder brother. The elder brother lives in a magnificent house, and has a fund for entertaining, besides his salary of $6000 year. The native chief is also paid a salary and an allowance. Under these residents there are assistant residents, controllers, and clerks, all of whom have their native subordinates, or younger brothers. The native rulers are of the nobility and the officials come from the best families. The common people, therefore, feel that they are ruled by the Javanese nobles, and the majority of them do not know that the foreigners are in actual control.

Much the same system prevails in the Dutch East Indies outside Java, although some of the islands, where the people live in a lower state of civilization, have to be held with a firmer rein. The higher-class natives often speak Dutch, French, and English as well as Malay and the various Javanese dialects.

The Javanese officials are treated just like the Europeans and the native chief's wife has the same standing as the wife of the Resident. The Resident and the Regent sit together at state dinners, and seem to be equals. The salaries paid to the native regents vary according to the province and the style they must keep up. Some have houses built for them at a cost of from thirty to forty thousand dollars apiece, and they receive salaries of five hundred dollars a month.

I am told that the Dutch believe that they can easily rule the natives if they can control the chiefs, but at the same time they are careful to let the latter know that they themselves are the rulers. They make it a principle

to be honest with the natives and to protect them in their rights. There are courts everywhere held by the Dutch officials, and in quarrels between natives and Europeans the natives are given the benefit of the doubt. They tell me that it would be much safer for me to strike a European here than a native, for the latter would be sure to land me in prison.

The government is strict in keeping its accounts. Taxes are honestly levied and must be honestly paid. Every village and every house in the whole island is numbered, and every horse and vehicle and every piece of ground pays its tax. The government's inspectors see that all taxes are collected. Its accountants go through the offices of the provinces examining the books, the cash, and the manner of doing business.

The officials endeavour to impress upon the natives the fact that the Dutch belong to a higher order of creation than the Javanese. They insist on being treated with the same respect shown the noblest of the Javanese chiefs. This is very evident in out-of-the-way districts. I have travelled for miles through the country where every man, woman, and child I met would squat down on the ground and fold his hands in an attitude of humility until I passed. While riding, I have met Javanese also on horseback. As soon as a mounted native saw me he would leap from the saddle in order that he might not be on the same level with me when I passed by. I have seen women with great bundles on their backs lift them down and seat themselves on their heels, putting their hands together in my honour.

The natives are perfectly used to taking this posture, which is called the *dodok*. From the earliest times they

have been accustomed to render such homage to all of superior rank. On public occasions no one approaches his sovereign or immediate chief without closing his hands and raising them to his forehead in token of respect. On festival days it is usual for the inferior chief to kiss the knee, the instep, or the sole of the foot of his sovereign, according to the relative distance of rank between the two men. One does not see the *dodok* in Batavia, where the ancient customs are not so closely followed as in central and eastern Java.

According to the *adat*, or custom of Java, those of lower rank must not sit above those of higher rank. There are two native sultans in central Java, and when the resident governors were first chosen to rule with them there was quite a discussion as to whether the Sultan should not be a little higher than his elder brother. The Dutch insisted on absolute equality, but it is said that for a time one of the sultans had silver dollars nailed to the legs of his chair in order that he might be a trifle higher up than the Dutch Resident when the two sat together.

I have a Javanese servant who speaks broken English and who acts both as boy and as interpreter. He whitens my shoes and my helmet, and sleeps in front of my door at night. He never smokes a cigarette when I am present and he never comes before me without his turban. It is etiquette here for the servant to keep his head covered, and it would be quite as impolite for Simo, my boy, to come in without his turban as it would be for your own servant to keep his hat on when he comes into your house. A native must not smoke in the presence of a European, and if he is smoking on the street he takes the cigarette out of his mouth and holds it behind him while Europeans

Most of Java's population of 720 to the square mile are dependent on rice for their food. Hence the government jealously watches to see that the rice lands are not opened up to unlimited exploitation.

Buitenzorg, "The City without Care," is noted for its Botanical Gardens, several directors of which have won international fame for their contributions to the knowledge of the plant life of the tropics.

pass. The Dutch official never requests his servants to do things, he commands them. The inferior is expected to use high Javanese in speaking to his superior, while the superior uses low Javanese in speaking to him. A Javanese is not supposed to speak in Dutch to a European unless the European especially requests it.

Such treatment seems ridiculous to Americans, but the Dutch say that it is a necessity in this part of the world, and that it is only by upholding the old customs that they can retain the respect of the natives. One of the richest of the planters, a Dutch baron, who has charge of a property worth several millions, and who employs hundreds of natives, tells me that the Javanese do not look upon such humility as degrading. These rules are observed as a matter of politeness and respect to their superiors. They have prevailed for generations, and the employer who does not insist upon them will soon lose caste and influence with his people, who will think him an ignorant boor.

So great is the servility of the common people before their native superiors that one would hardly believe it without the evidence of his own eyes. I have seen princes kissing the feet of their fathers and crawling along to them on their knees, and I once saw a thousand officials squatting down on their heels in honour of one native chief.

I have spoken of the education of the Dutch officials. Every clerk who wants to rise in the colonial service has to be a graduate of the public schools and take a three-year course at the University of Leyden. He must be able to speak French, German, and English and at least two of the native languages of Java, one of which must be the Malay tongue. There are four languages spoken in Java, but

the Malay is in common use everywhere. The higher officials and those who act as judges of any of the courts must be able to speak three languages, and must also be graduates in Dutch law, as well as thoroughly posted on the native laws, customs, and religions of Java. Those who do not aspire to the highest rank may receive their education at the Civil Service College at Batavia.

The native officials are also well educated. They go to special training schools, while those who show particular aptitude are sent to the Civil Service College at Batavia and are prepared for higher positions. Here they are taught both Dutch and English, Dutch East Indian law, political economy, and, in addition, such practical subjects as agriculture, irrigation, and hygiene.

After graduation the would-be Dutch government clerk is sent out here on trial. He must pass an examination for aspirant controller and if successful is assigned as an assistant to a controller, or minor official, of one of the provinces. At first he gets only a small salary and a house, for he is as yet only on probation, and he must serve several years before he can be examined for the position of controller of the second class. If he passes this examination he receives a 50 per cent. salary increase a month, and later on becomes a controller of the first class, with a better house and higher pay. If he proves his efficiency here he possibly becomes an assistant resident and then a resident, with a palace and $6000 a year.

The duties of the local administrators are by no means light. The aspirant controller goes about with native officials to superintend the roads and to take the census and examine the rice fields and other crops. He is a sort of clerk of all work. The controllers are the police

officials. They rule through the natives, but are responsible for the good conduct of the district. The assistant residents sit with the native priests and chiefs, and act as judges, and the residents are little kings, who govern their provinces, telling the native governors what to do and how to do it.

The Dutch treat the men in this colonial service very well. At the end of every ten years each gets two years' vacation with half pay or one year with full pay, and a trip to Europe with his family on passage money furnished by the government. He has free medical service, and if the doctor says he is not well he is allowed sick leave and a trip to Europe. After twenty-five years' service he is retired on pension and sent home at government expense. The pension, however, is only one third his salary, and on this account many clerks prefer to stay. The officials are not allowed to engage in business in Java while in office, although many settle there after retiring.

It is a question whether it would not pay Uncle Sam either to establish a school of his own or to lay out a course which might be followed in our colleges, to train young men for foreign service. Every American official in the Philippines or our other possessions should understand the principal languages and dialects used in the islands, the customs of the people and their laws, and at the same time be well educated in other respects.

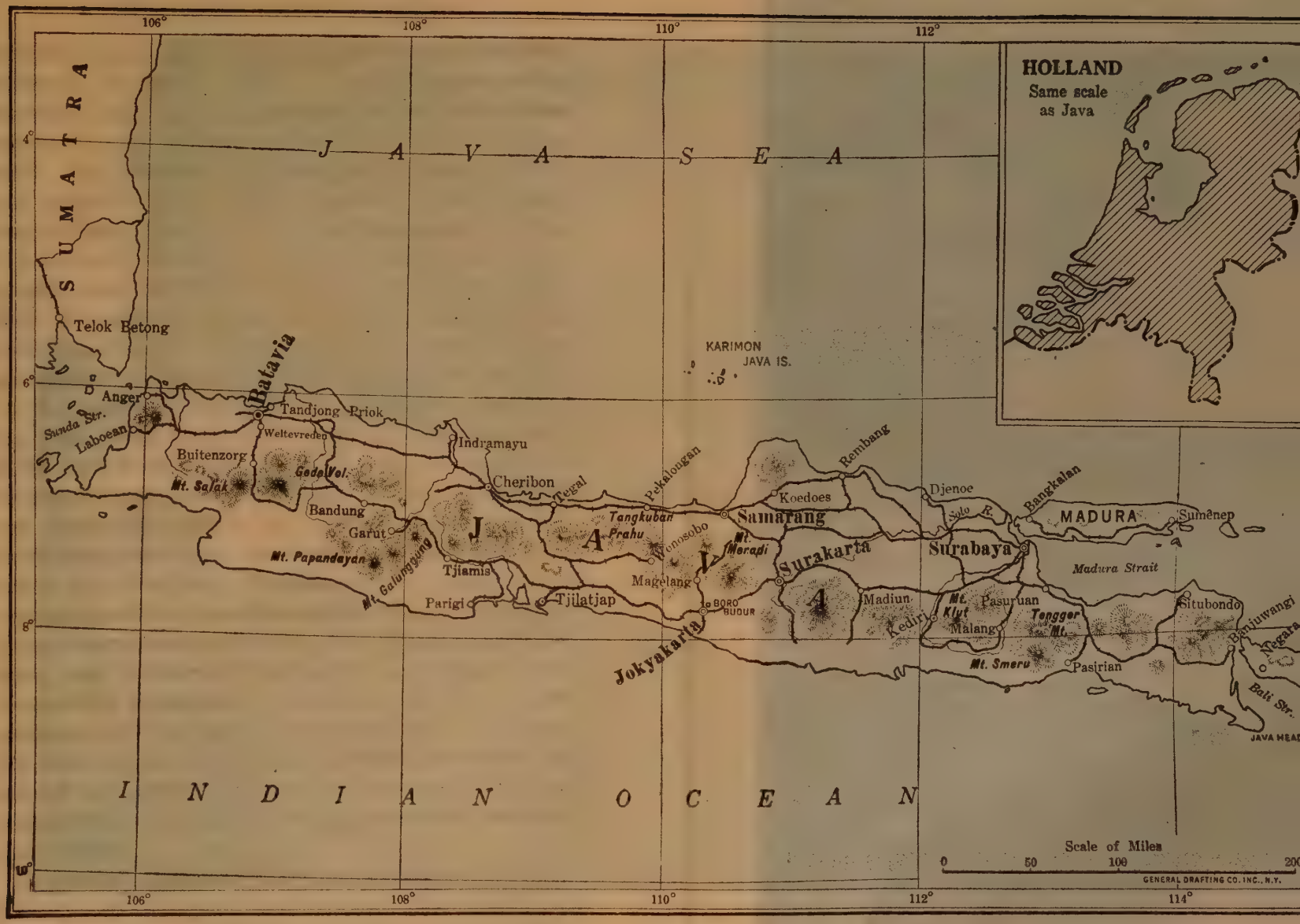
CHAPTER V

HOW JAVA PAID ITS WAY

THE story of Java and how Holland has made it the best-governed colony in the world is full of interest. The first Dutch settlements were made by the Dutch East India Company, which handled the colony for about two hundred years and handled it badly. Its policy was to squeeze the natives for all they were worth. It monopolized the trade in spices, opium, and pepper and discouraged trade with other nations. The result was that at the close of its rule in 1798, the company was $45,000,000 in debt.

Then the Dutch government took possession of the islands and sent on its own officials. Among the earliest of these was General Van den Bosch, whose name is associated with the so-called "culture system." Before this the lands of each kingdom or state belonged absolutely to the local princes and were occupied only by their consent. The king or prince allotted the lands to the people and each holder paid him a portion of his crops, about one thirtieth being set aside for the priests. In addition to this, the people gave a day or a day and a half of labour every week to their rulers.

On this foundation General Van den Bosch firmly established the culture system under which Java was opened to capitalists and made a paying proposition. The Dutch government let Europeans have money for



JAVA

alone is four times as large as the Netherlands in Europe, and has nearly six times as many people, while it would take fifty-seven Hollands to equal the total area of all the islands of the Dutch East Indies.

four times as large as the Netherlands in Europe, and has nearly
fifty-seven Hollands to equal the total area of all the islan

factories on easy payments and aided them in establishing businesses all over the island. It was arranged so that employers could have a large amount of free native labour and to a certain extent could get forced labour for their work. Any European who could give the proper security and references could borrow $45,000 on twelve years' time without interest. He had no payments whatever to make until the third year, after which he was to pay annually one tenth of the principal until all was paid. With the money he was required to put up buildings and furnish machinery, according to plans approved by the government. The natives furnished the raw materials for the factories as well as free labour for a period of two years. The people were required to plant one fifth of the land in the crop needed and received a certain remission of taxes in lieu of the same. In land, time, crops, and labour the native was obliged to give up more under this system than could ever have been got out of him in any other way. Furthermore, it is said that the enormous profits of the colonial government, which shared in these operations, were sent back to Holland, instead of being kept to improve the Dutch East Indies. The government monopolized practically all the valuable products, such as spices, tea, coffee, teak, and sugar. Yet while abuses crept in, on the whole the system improved the general condition of the people and was responsible for the introduction of a number of new crops and products.

It certainly increased the revenues of the colony, for after the culture system was introduced they steadily rose from $10,000,000 until they reached the annual amount of almost $50,000,000. Netherlands India soon paid off its

debts to Holland. Its imports were tripled and its annual exports jumped from $10,000,000 to $40,000,000. Crime diminished to such an extent that the courts sat only one month in the year, and within twenty-five years the population of Java was changed from one of six thousand paupers to one of eleven million rich peasants. This system continued in force until 1871, during which time it paid Holland a surplus of $280,000,000.

Since then the country has failed to pay its expenses. Forced labour has been abolished, and most of the business is in the hands of private parties. Taxes are generally paid in money rather than labour, as formerly, and for the last five years the annual deficit has been about $10,000,000.

At the same time the population has steadily increased and the corporations have made big profits. One authority states, for example, that for six years the dividends of nine of the most important tobacco companies in the Dutch East Indies averaged 28 per cent. every year.

Three present sources of revenue are the government monopolies on salt, opium, and pawnbroking. The use of opium was introduced by the Chinese to whom up to some twenty years ago the government gave a monopoly. But they abused their privileges, not only by excessive sale of the drug, but by smuggling it in from India and Singapore. So the authorities took the business into their own hands. Now no one is allowed to have more than a certain quantity in his possession or to sell more than a specified amount to any man. Opium is sold by government officials, whose books are regularly inspected. It is proposed to raise the prices, but the higher the price the more profitable the smuggling. Steamers from Calcutta or

Singapore are always suspected, and some are accompanied by the customs gunboats from the time they appear on the horizon until they make port. Nevertheless, the opium gets in. Sometimes it is hidden in bamboos and thrown overboard, to be fished out later by the natives or Chinese, whose small craft literally swarm in the strait between Java and the island of Bali.

It was the Chinese again who drove the Javanese government into the pawnshop business. They had bought pawnbrokers' licenses, but their usurious rates were such that the natives were being rapidly reduced to a state of slavery by the money-lenders. The Malays have no idea of thrift or the real value of money and hence are easy prey for the shrewd Arabs and Chinese. There is a story of an old market-woman of Surabaya, who years ago borrowed a guilder from an Arab, on condition that every day she was to pay him three sen. She has not yet paid him back that guilder, but, instead, has kept on handing over ten guilders a year for its use and she seems to think it is all right. I am told that many half-caste women in the suburbs of Weltevreden lend native women a guilder on their way to market in the morning, requiring a guilder and a half from them on their return in the evening. It was such conditions that made the government decide to take over the pawnshops. They have now more than three hundred and fifty such shops and the turnover is steadily increasing.

I cannot leave Buitenzorg without mentioning its wonderful botanical gardens, famous all the world over as the finest collection of tropical plants in existence. Here, besides fully grown specimens of every known tree of the tropics, are culture plots for sugar-cane, rubber, coffee,

tea, spices, gums, fruit trees, bamboo, rattan, mahogany, and teak.

There are avenues of splendid kanari trees, with trunks overgrown with vines and creepers, and long lines of palms, banyans, and waringens, the tree that is the sign of royalty all over Java. Here also is the deadly upas, which exudes a milky white gum, used by the natives in the days of tribal warfare to poison their darts. Another tree has berries, which, mixed with water, will make soap in ten winks of an eye, and still another grows fruits that look like wax candles. There are also ant plants, the swollen spongy stems of which swarm with ants of various kinds.

There are gardens where bloom the fragrant frangipani, the waxy white tuberose, which here has a Malay name meaning "charmer of the night," and the bougainvillea, the most beautiful climbing plant in Java, with its flowers of brilliant lilac, or of deep red, blue, and lilac combined. There are collections of the most gorgeous orchids, so plentiful in these islands that they sell for five cents apiece, and of rare and sensitive plants which must be sheltered in greenhouses not from the cold, but from the sun's withering rays. The day heat of Java is such that many flowers do not exhale their perfume until night; only after the dew falls do they breathe out their sweetness.

The building that houses the Department of Agriculture, Industry and Trade is a symbol of the admirable Dutch rule in Java. The colonial civil service is exceptional in its high standards of education and training.

In the Botanical Gardens are ponds covered with the great lotus, Victoria Regia, which has leaves six feet in diameter and blossoms sixteen inches across.

Tea plants do best if raised in the hills of from one thousand to four thousand feet elevation. At about six years, when the shrub is mature, its average yield is a pound of leaves every year.

The administrator of the great Malabar tea estate, employing hundreds of workers, does not suffer for lack of the comforts of life, and when he rides out from his house every native he meets squats down in salute.

CHAPTER VI

ON A BIG TEA PLANTATION

WE AMERICANS now drink about eighteen million dollars' worth of tea every year. We import more than enough to give five pounds annually to every family in the United States. Of this, five million pounds come from the Dutch East Indies, mostly from Java, now considered one of the best tea-raising countries of the world. Tea growing was started in Java by the Dutch authorities in the botanical gardens about one hundred years ago at Buitenzorg, and within five years they had plantations containing half a million trees. Up to 1842 the industry was a government monopoly, but then when the number of trees ran high into the millions, it was thrown open to private parties. At present there are vast areas given up to tea raising. In coming here to Tji Badak from Batavia I travelled for many miles through mountains covered with tea bushes, and I write these notes in the lap of the two volcanoes, Mount Salak and Mount Gede, where is one of the largest tea plantations of the whole world. In China and Japan tea is grown in garden patches. There are seldom more than a few acres in one holding. Here the business is one of large estates operated with European capital.

Take this Sinagar estate, for instance. It has about fifteen thousand acres and is constantly setting out new

tea fields. It has now over thirty-five hundred acres devoted to tea, and produces more than a million pounds of the finest grades every year. The estate, which has a capital of three hundred thousand dollars, yields dividends of 9 and 10 per cent. annually. It has paid as high as 24 per cent. and I don't think it has ever failed to pay well. The plantation is managed like a great business institution. It has its directors, its administrators, bookkeepers, and civil engineers. It has a vast system of irrigation, with culverts which would do credit to any railroad construction in the United States. The managers have made analyses of the soil, and raise tea on scientific lines. The plantation employs fourteen hundred men all the year around, and at times has three thousand women picking tea. Its annual wage account runs over 250,000 guldens, and in addition it furnishes its own employees with medicine and rice. There are several towns on the estate all subordinate to the director, who is a sort of patriarch or feudal lord over the whole.

If you could just go with me into the houses of the Europeans on this great tea farm and see how the Dutch suffer in these backwoods of the tropics, you would no longer waste any sympathy on our people who have taken up their homes in the Philippines. The truth is, the most luxurious life of the world is that of the Far East. Here at Sinagar the people live as well as they do in any part of Europe. Their houses are large and airy. They are well furnished and are lighted by electricity. There are stables of fine horses. I rode for miles over the tea lands one morning on a sandalwood pony and upon my return was shown a half-dozen blooded runners which were being trained for the races. The American consul

at Batavia arranged for my visit to the plantation through a long-distance telephone. I find that the daily newspapers come every morning. Upon landing at the station of Tji Badak I was met by a carriage with a team of bay horses and an old native coachman in visor and *sarong*, who drove me to the estate over roads lined with palm trees of a dozen varieties, through fields of pale green sugar cane, and on the slopes of the hills through acres of the tea.

The director of Sinagar has both a zoölogical and a botanical garden. He is fond of animals and flowers. Luncheon was served shortly after I arrived and while we were eating, two little red parrots flew in for a share in the meal. They moved this way and that at the command of the master, one lighting on my head, possibly attracted by the similarity of colour, for my hair is of a brick-dust hue. The parrot jumped next on the hand of the planter and then fastened itself to his wrist and ate from his hand. Later on while we sat at tea on the wide veranda two gorgeous peacocks came up and begged for a bite, and a New Guinea pigeon, a brilliant bird of sapphire-blue as big as a chicken, its head ornamented with an aigrette plume which quivered in the sun, strutted about. On the front lawn there were Chinese pheasants and a mocking bird from Australia, which said "good-bye" in English and chattered fluently in Dutch.

Near the stables I noticed an inclosure containing two of the wild cattle of Java. One was an immense bull six feet in height. It was jet-black with white legs. There was also a cow, but this was smaller and of a reddish fawn colour. My hosts here are all great hunters. The director and his son have both killed their hippopotami,

and the manager has a collection of trophies which would be the envy of our National Museum. He has the skulls and skins of panthers and tigers. He has shot elephants and rhinoceros and deer and other animals galore. He tells me that the mountains of Java are full of game, and has suggested that I take a journey with him into the jungle for rhinoceros or go to Sumatra for an elephant hunt.

In a botanical way this whole country is full of wonders. There are tropical air plants of every description. There are some vast orchids like stag horns and others with great green cups as big as a barrel with ragged-edged petals which fall down like beards and sway in the breeze. There are nutmeg, cinnamon, and pepper trees and all varieties of tropical fruits. Here on this great tea farm are streams running by the houses the music of which lulls you to sleep, and there is a swimming pool walled with marble in which you can float about under the roof of the sky. The Dutch have their house parties, going for miles from one estate to another. The daughters of the planters are educated in Europe. Many of them are fine musicians. They all speak several languages, and there are few estates which do not have their music rooms, reading rooms, and billiard rooms.

I wish you could ride with me over this huge plantation. It would take you days to cover it, but when you had ended your travels you would know all about tea and how it is raised. The shrubs are of different varieties. Some tea plants are no higher than my waist, with trunks as big around as my leg. They are the Chinese variety which have been trimmed from year to year and kept short. The leaves are like those of the willow tree and have a tea

smell. The first picking from them brings very high prices. There are other fields, in which the plants are taller and more luxuriant. These are of the Assam or Indian variety, which is now being grown in Ceylon, in the Himalaya Mountains, and more lately here in Java. We should visit the nurseries, where the seeds are set out. They are planted in wet sand and soon sprout, and when they are eight or ten inches high are transplanted. They are hoed and kept free from weeds, and are cultivated for two years before they begin to produce tea. It takes about six years for a plant to mature, after which it should yield a pound annually. Some of the bushes on the estate are forty years old. There are tea plants in Japan whose age is beyond the memory of man.

The flavour of Java tea, which is not so strong as the Chinese varieties, seems to depend more on altitude than on soil. The plants are grown at an elevation of from one to four thousand feet. They are injured if water collects about their roots, and hence well-drained hills are usually chosen. As they also need the sun, no other crops are grown between the rows, and the young shrubs are set out at a distance of four feet apart.

Sugar cane and tobacco must be harvested as soon as they are ripe, but tea leaves are gathered all the year round. The plantations are usually divided into plots and the work is so regulated that every forty or fifty days each of these is carefully gone over.

The names under which tea is sold in our stores do not stand for the many species of plants, for practically all the tea of Java is of the Assam variety. The differences lie in the age at which the leaves are picked. The famous Pekoe, for example, is from the very young leaves,

Souchong is from the smallest, and Oolong and Congo are from different grades of leaves of the same plant.

In recent years the natives have been growing tea for themselves. They pick the leaves and sell them to the neighbouring plantation factories. Lately tea culture has been extended to Sumatra, where considerable British, Dutch, and German capital has been invested.

It is interesting to watch the tea picking. Thousands of little brown women dressed in bright-coloured *sarongs* with plump golden-brown arms and shoulders bare are moving about among the green bushes. Here they are bending over the plants; there they are squatting down and pulling off the leaves, laying them on great square cloths, in which later on they will bundle them up to be carried on their heads to the factory. They are of all ages, some little girls, some young women, and some gray-haired matrons. Few are really pretty, many are homely, but all are good-natured and very industrious.

As I rode about through the estate I met gangs of these women carrying the tea to the factory. Though each one had a bundle as large as a two-bushel basket on her head, she walked along perfectly straight until the manager and I came in sight. Then she and her sisters would all duck down, making the *dodok* while we passed. At first it made me feel like a king to receive so much honour, but I understand that the natives regard this salutation just as we do bowing or taking off our hats to each other when we meet.

I asked about the wages paid on the plantation and was told that the 1400 men who are employed regularly are paid a few cents a day and rice, or, at the rate of about one tenth of what our unskilled labourers make. Their

hours are from six to twelve, no work being done after noon. The women receive still less, but many make more at piece work. It gives one an idea of the cost of living in Java to know that people can support themselves and be happy on such wages.

Because of their light, small fingers, the women make the best tea-pickers. The greatest care is required in picking, for the tea leaves are valuable according to their age, the part of the bush from which they come, and the time at which they are gathered. The leaves taken early in the morning are said to have a better flavour than those plucked later in the day. The first growth is the best, the young top leaves producing the finest grade of tea.

At Sinagar the tea is cured and prepared for the market on the estate. The factories, which are not far from the plantation home, are immense one-story buildings, covering acres, with galvanized-iron roofs and walls of woven bamboo. The buildings are floored with stone and equipped with modern machinery. Entering them is like going into a machine shop. Great wheels and leather belts are driving the tea-rolling and drying machines.

The floor is covered with tea. There is an acre of wet green tea leaves lying upon it, spread out there to wilt so that when they are picked up and squeezed they will not crack. After it comes from the bushes, the tea is withered on this floor and then put into rolling machines which do the work the Chinese and Japanese do by hand. These machines are great steel tables that are given a circular motion by machinery, with other tables above them moving in the opposite direction. The tables are so adjusted as to roll the leaves about without crushing

them. When the leaves go in they are flat; when they come out they are a spinach-like mixture, and a handful resembles so many little green worms. After this the tea must be fermented and dried. The drying is done by means of hot blasts and revolving fans. The result is that the tea which comes out is perfectly clean, not mixed with perspiration as in China and Japan. The factory makes its own boxes out of Javanese wood. It grades the tea and packs it and ships it to the great tea auctions at London and Amsterdam and to all parts of the world.

The Japanese, who produce about 75,000,000 pounds of tea annually, use methods of cultivation and curing very different from those of Java. The plants are set out in hedges, which look much like hedges of boxwood, each from three to five feet high and about two feet wide. The rows run parallel across the fields and often rise in terraces one above the other.

Most of the Japan tea is green, especially that which is sun dried. Other teas are dried in copper cylinders or pots and sometimes indigo and soapstone are mixed in the drying pans to give the tea a green tinge. The tea is all picked by girls who bring the leaves to the house of planters, where they are fired and steamed.

The work is not complete, however, until the tea is refired in the factories at the seaports. In Yokohama and Kobe I went through some of the largest of the tea-firing godowns. This process is carried on in great pans about twenty inches wide and thirty inches deep fitted into brick ledges with charcoal fires under them. The tea is put into the pans by Japanese girls, often bare to the waist, who lean over the hot pans and roll and knead the drying tea with their hands. It is very warm in the

The different names under which grades of tea are sold represent not so much different kinds of plants as the ages at which the leaves are picked from the stalk. The younger the leaf, the finer the flavour of the tea.

This ancient gateway, built 250 years ago, is all that remains of old Batavia. Descendants of the natives who formerly fought to keep out the foreigners now make up a part of the colonial army.

factories. Pearly drops of perspiration ooze out of the backs, chests, and arms of the tea workers, and it would be strange indeed if they did not now and then fall down into the leaves being prepared for our tea cups. It takes about an hour to fire one lot. After firing, the finer teas are picked over leaf by leaf and then packed for shipment.

In China I have seen tea which sold for twenty-five dollars a pound, but this is consumed entirely by the mandarins and none of it comes to the United States. Tea which costs ten dollars a pound is not uncommon among the rich Chinese, and I have heard of tea which has brought as much as fifty dollars and even more per pound. The difference in the tea is largely according to the district in which it is raised. There is one little section of Formosa, Japan, which produces the most delicious of tea, and there are regions south of the Yangtse-Kiang in China where the tea is worth almost its weight in gold.

The great central tea market of China is at Hankow, about seven hundred miles up the Yangtse-Kiang. I spent some time in going through the factories there not long ago. The tea comes in by water from all parts of the country. Hankow is a great centre of navigation, and there are thousands of barges always moving toward it up and down the various rivers, over the Poyang and Tungting lakes and through the numerous canals.

While there I saw them making brick tea. This was done in large factories. The tea leaves were ground up and steamed until they became soft and mushy. They were then pressed into bricks and dried by steam. The fine varieties came out looking for all the world just like the little cakes of chocolate sold in our groceries. These bricks are sold almost exclusively to the Russians.

Some of the Chinese tea sold in the United States is cured in much the same way as the Japanese tea, quite as little regard being paid to cleanliness. The tea is fired by hand and is often packed in the boxes by half-naked coolies, who tramp it down with their bare feet.

The wages of the tea workers in China are almost as low as in Java, and it is doubtful whether tea can be raised in the Philippines without cheap Chinese labour.

CHAPTER VII

THE NETHERLANDS INDIA ARMY

TJIMAHI, not far from Bandong, is one of the chief garrisons of the Dutch colonial army. It is situated six hours from the coast, about two thousand feet above the sea, and nature has built its own fortifications about it. The camp lies in a plain several miles wide walled by mountains which rise in blue grandeur until they are lost in fleecy white clouds. The place is an amphitheatre walled by extinct volcanoes and roofed by the sky. It is easily reached by magnificent roads, and the trunk line of railway from Batavia to Surabaya also goes to it.

I have been much interested in the soldiers whom I have seen in different parts of Java. The Hollanders among them are magnificent fellows, tall, straight, and well formed. They are especially well dressed and of gentlemanly behaviour. I have talked with the officers about the army, and I find that there are in the Dutch colonial empire of the East Indies thirty-six thousand soldiers, of whom only six thousand are Europeans. The population controlled by Holland in the East Indies includes natives of every variety found in the Far East. There are savages as wild as the hill tribes of Mindoro and Mindanao, and there are also semi-educated farmers like our Filipinos of Panay and Luzon. The Dutch have more tribes to control than we have, but they understand so well how

to use their soldiers that they need only one European to every eight thousand souls.

The Hollanders have been experimenting for a century so as to get the best accommodations for their soldiers in this tropical climate. The buildings of Tjimahi consist of vast barracks made of bamboo. The bamboo cane is split into strips when it is green and flattened out. Each strip is shaved so that it is as wide as an ordinary lath and perhaps an eighth of an inch thick. Many of the strips are forty feet long. They are woven into great sheets to form the walls of the barracks. They are rain-proof and at the same time airy and clean.

Walls of this kind are nailed to studding which upholds roofs of galvanized iron. The floors are of stone and the buildings are cool and comfortable. Each is about thirty feet wide and one hundred and fifty feet long. There is an aisle through the centre in which the guns are stacked and on each side of this are the beds for the soldiers. Every bed has a good mattress, over which is a rug, made of woven straw for coolness. The non-commissioned officers have rooms to themselves apart from the privates, and the commissioned officers have houses as comfortable as any one could possibly wish.

In Java the foreign men often take wives from among the natives. I do not know that these matrimonial alliances are permanent. They are probably not when the men go back to Europe, but they seem to hold good during their stay here. There is a quarter of the camp which is devoted to the wives of the soldiers. Here they sleep with their children and here are their quarters while the men are on duty. Many of the women live with their husbands in the barracks, but the children are always kept

JAVA AND THE EAST INDIES

are believed to have been formerly part of the continent of Asia, and also joied to what is now Australia. Most of the islands belong to the Dutch.

outside. The food for the women and soldiers is all cooked in the garrison kitchens, but the men must pay for the rations.

I went through the kitchens and sampled the food, which is cooked in great cauldrons. I am told the expense of feeding a man is only a few cents a day. I spent some time in the women's quarters making photographs. The women were not averse to posing, but stepped out into the sun in front of the camera. They were clad in Javanese costume. Nearly all had children; and many had babies at the breast or astride their hips.

The Dutch officials take good care of the wives of the men, and see that their children are educated. I visited one of the schools and found about fifty little yellow Javanese working away. Each was in his bare feet and each wore a turban, a jacket, and *sarong*. When I heard them recite they impressed me with their intelligence. There was a piano in one end of the room, and I asked the native teacher if the children could sing. He replied: "We will try and see." He then called attention, and asked the little ones to sing the Dutch national hymn. They did so, not in words, but they "carried the tune," the teacher starting them off with his "*Ein, zwei, drei.*" Later on I saw the boys go through their gymnastics and drill. I think they are the equal of any of our own school cadets.

The government believes in keeping the soldiers contented. It spends a great deal on amusements for them. Here at Tjimahi there is a soldiers' club, called "The Canteen," which would be a credit to any camp of the world. The club house is a large one-story stone structure with ceilings twenty-five feet high. It has magnificent

rooms looking out upon wide galleries upheld by white Grecian pillars. It has a theatre with motion-picture equipment, full stage settings, and a beautiful drop curtain with pictures upon it which were sketched in by the officers and painted in oils by the men. The chandeliers are of aluminum and the floors of marble. The canteen has billiard rooms, reading rooms, and card rooms, and the lawns and flower gardens about it are as beautiful as those of a millionaire's place on the Hudson.

During my stay here I have gone through the military prison. It is more comfortable then Bilibid, our penitentiary in Manila. It is made in much the same way as are the barracks, save that there is a great wall around it, and the entrances are closely guarded. The prisoners are forced to work. In one of the rooms I saw fifty of them making clothes for the army, using American sewing machines. In another department were two score shoemakers, and in others there were jewellers, carpenters, and workers in iron. The prisoners are paid a trifling wage for their labour. They are well fed and well treated. They have books to read from the prison library, and their wives are allowed to call upon them once every week.

The Dutch and native privates seem to be on an equality in the army. They march together in the same battalions, many of which consist of two companies of European soldiers and two of natives, or, more often, one of Europeans and three of natives. The half-castes are on a footing of perfect equality with the Europeans, but at least 50 per cent. of the non-commissioned officers must be Europeans. All the higher officers come from Holland. They are fine fellows, well educated and highly trained. Together with the officials, they form the aristocracy of

the foreign colony, and, as a rule, live in great style. There is a military academy near Batavia, and the military clubs at Weltevreden would be considered first-class in any European settlement. The natives are said to make very good soldiers, although there is a vast difference in them, according to the tribe and the locality from which they come.

Most of the twenty-odd thousand native troops come from the island of Amboina, which is one of the Molucca group, and from northern Celebes. They are born soldiers and are practically all Christians. A century ago the Menadonese, as the people of this part of Celebes are called, were savages. They built their houses on tall posts in order to defend themselves from their enemies and were head-hunters like the Dyaks of Borneo. Human skulls were the favourite ornaments of the chiefs and strips of bark their only dress.

Then, in 1822, the coffee plant was introduced, and the natives found they could make a better living by working than by fighting. Industry, together with the continued labours of the missionaries, has changed their whole habits of life and to-day their amiability and comparative freedom from vice are proverbial. They have not, however, lost their old fighting spirit and hence like to serve in the army. When going into wild country the native infantry is usually armed with carbines and the short, sharp native knives called *klewangs*.

The Europeans between the ages of nineteen and thirty-two must serve in the militia, and those between thirty-three and forty-five must serve in the reserve forces. The militia companies have frequent drills, which are usually held from four to six in the afternoon and are quite severe.

This regulation is, I suppose, to prepare the foreign population for self-defence in case of an uprising of the natives. The Dutch have had such rebellions in the past, and although there is little danger in Java, in Sumatra and other places the foreigners must be alive for such an emergency. There is a tribe known as the Achinese, in northwestern Sumatra, which has been in rebellion for generations. The Achinese number about five hundred thousand, and their country is about half as big as Ohio. They have always been noted for their hatred of foreigners. They fought the English and the Portuguese and after them the Dutch. It is estimated that the various wars with the Achinese have cost the Dutch more than two hundred thousand lives and something like $200,000,000. At present Achin is said to be pacified and Kota Raja, once the scene of desperate fighting, is the seat of a Dutch governor and headquarters of the army of occupation.

I heard the other day how the Resident of Palembang in Sumatra frustrated a plot in which the native chiefs conspired to kill him and seize the government. The scheme was to set the city afire in a quarter where it would do little damage, with the expectation that the Resident and soldiers would run to it. During the burning the natives planned to capture the fort and kill the Resident and his soldiers, including all the Europeans.

The Resident, however, was warned by one of his spies and did not go to the fire. Then the chiefs demanded that he meet them and planned to kill him when he came to the appointed place. The Resident consented, but the night before he powdered his face until it was a ghastly white and placed medicines beside his bed. He then called in some of the conspirators and told them that he

The Dutch officials see to it that the soldiers' children go to school. The boys are also given military training with a view to putting them into the army as non-commissioned officers when they grow up.

Javanese women have slender figures and small hands and feet. While the children are often beautiful, their mothers soon lose their good looks. These women live in the family quarters provided for wives of native soldiers.

was sick and that he could not possibly meet the appointment. He asked them to have the chiefs come to the palace instead on the following day.

The chiefs then plotted to start the revolution at the palace, but when they arrived they were admitted one by one and received at the point of rifles in the hands of the soldiers. The Resident came out and ordered that they be put in prison. There were just enough chiefs to fill all the cells except one, whereupon the Resident's majordomo, a native of high rank, who had secretly been in the conspiracy, said: "There is one more cell, Your Excellency, who shall go into that?"

"That is for you, you rascal," was the emphatic reply. The Resident thereupon gave a sign to the soldiers and they took the man to prison.

CHAPTER VIII

IN AND ABOUT BANDONG

I AM delighted with Java. The Dutch have made this island a veritable Garden of Eden. It is a paradise of the tropics; and is, I believe, the most beautiful spot on God's green earth. It is of the same character as many of the Philippine Islands, and its mountains are not unlike those of Porto Rico, although they are grander and higher.

Java is nearer the Equator than any of our colonial possessions, but a great part of it has a good climate, and the Hollanders thrive. It is not true that Americans cannot live in the tropics. The highlands of the Philippines are healthful; and Bandong, where I write this, would be a popular resort if it could be dropped down upon the United States. It has an elevation of twenty-three hundred feet and such a good reputation for climate, sanitation, and low rents that it is a favourite place for the homes of retired Dutch officials. There is generally a mist in the morning, but by seven o'clock this disappears and fresh mountain breezes blow over Bandong the rest of the day.

This country is a land of mountains. There is a range running through it from one end to the other; and it has more volcanoes to the square mile than almost any place on the globe. I wish I could show you the mountains through which I travelled coming here. On all sides

were extinct craters covered with green almost to their tops. The lower slopes were terraced with rice fields, and above them pines and other trees extended on and on until lost in the clouds. Now we crossed plains as fertile as the Nile valley upon which water buffaloes and fat cattle fed; again we shot past groves of coconut trees and wound about through banana plantations. Now the engine puffed and snorted as it dragged us up the rice terraces. In places the fields were flooded and the trees which bordered them were doubled by their reflections in the water. We passed hundreds of villages of huts made of plaited bamboo, went by tea plantations and coffee plantations, and climbed up through forests of quinine trees, until at last we came to this town on a beautiful plateau.

Bandong has about 60,000 people, of whom 8000 are Europeans. The remainder are Javanese with a sprinkling of Chinese, Arabs, and half-castes. The city is a veritable botanical garden. The houses of the foreigners are shaded by the grandest trees of the tropics. They are surrounded by lawns as velvety and as well kept as those of old England, and the wide drives leading up to the more pretentious homes lie between rows of royal palms, some more than a hundred feet high. The Europeans live in villas, with walls and porticoes of snow-white roofed with red tiles. They are all of one story and exceedingly comfortable.

Even the stores are like villas set back from the streets, with yards in front of them and palms and tropical flowers ornamenting their verandas. There is one just opposite my hotel shaded by a tree whose wide-spreading branches cover about one fourth of an acre, while on its great

trunk scores of orchids are growing. At its base are tropical plants in pots of red clay, and one enters the store between rows of curious dwarf palms growing in tubs. That is a jeweller's shop. A little farther on is a drug store in a similar setting, and if I want to buy groceries, clothing, or books I shall have to walk through palm trees and flower gardens to do my shopping. This is so all over Java and it is delightful.

As far as I can see the foreigners live better here than at home. No city in Holland compares with Bandong for comfort, and I doubt whether there are any in which the children are more healthy or the people more prosperous.

The Dutch girls are plump, and fat babies abound. The children enjoy themselves. I have met many parties of girls riding bicycles and have seen automobiles flying along over the excellent roads of the island. I can buy anything I want in the stores, and find I can live as well here as anywhere in Europe.

How would you like a hotel which furnishes its guests gin cocktails free twice a day? That is what I get at the Homann here. The big bottle is set out on the table on the hotel veranda with bitters beside it, and each guest takes as much as he pleases. The bottle contains Holland gin so old and so hot that two tablespoonfuls would give a cigar-store Indian an appetite. The cocktails are drunk by both women and men, and they are, I am told, furnished free at all the hotels. Besides being good, the living is exceedingly cheap. At Homann's my rate by the day is much less than it would be in a first-class hotel in the States, and everything is included. There are swings and teeter boards on the lawns for the children, and all sorts of gymnastic apparatus. There is a billiard room and a

reading room, and every guest has a sitting room and a bedroom on the ground floor.

The natives of Java live very simply. A few of the chiefs and nobles have houses like the Europeans, and the regents have palaces which are kept up largely by the government; but the great mass live in huts of woven bamboo thatched with palm leaves. The walls of many of the houses are just like basket work. They are woven in great sheets and sold by the yard. I frequently see a pair of brown bare feet trotting along under the wall of a house. The wall is bent double, entirely concealing the man within, and looks much like the cover of an emigrant wagon moving upon legs.

The native part of Bandong is separate from the section where the foreigners live. It is a bamboo city containing about 40,000 people. It is divided into streets and alleys, each hut having its own little garden. The houses are all numbered and the government keeps a record of every family. Nearly all the huts are small, on the average not more than fifteen feet square, and so low at the front that their owners have to stoop to enter them. The thatched roofs overhang, covering the porches in front of the houses and sometimes the seats built around the sides. The usual house contains but one or two rooms, a recess in the rear forming the sleeping place for the family. The poorer homes have no beds, for the people sleep on the floor. The cook stove is a clay bowl with a draft under it. The cooking is done outside the house except in wet weather, and as the stove is portable this is easily arranged.

In the Chinese quarter are some seven thousand Celestials, living either in wooden shanties or in brick dwell-

ings, according to their means. There are many rich Chinese in Java, who live in palatial mansions, some of them costing as much as a hundred thousand dollars. In the whole island there are nearly three hundred thousand Chinese, some of whom worked as day labourers until they saved up enough to start in business, usually as peddlers selling in the country districts. Once launched in trade, the Chinaman, in Java or anywhere else, generally makes money. There were many Chinese in Java before the Dutch came, and in the early days they frequently stirred up the natives against the white intruders. Each large town in Java now has a section called the "Chinese camp" where these people live, under the rule of a "Captain Chinaman" who is appointed by the Dutch and held responsible for law and order in the Chinese quarters. In some of the bigger towns there is also a "Major Chinaman," with a captain and lieutenants under him.

In Buitenzorg, the Chinese section is one of the best parts of the city. It is fully a mile long, and lined with one-story buildings heavily roofed. Each building has a Chinese sign at its side, and the merchants within are Chinese. It is the same in Bandong, Surabaya, and in every Javanese city.

The Chinese intermarry with the natives and a common sight is a Chinaman dressed in European clothes riding along in a carriage beside a brown Javanese girl gorgeously dressed. They treat their wives well and are as fond of their half-caste children as their ancestral fathers were fond of them. Many Chinamen marry half-caste girls, and half-caste children swarm everywhere in the Chinese quarters.

The Arabs, of whom there are more than twenty thou-

sand in Java, also live in a section to themselves and are governed in a similar fashion. Like the Chinese, they are great retail traders. In the Dutch East Indies there are all told about 830,000 so-called "Foreign Orientals," chiefly Chinese and Arabs. Of these nearly 400,000 are in Java.

All over the island the natives live in villages. The visitor sees no houses scattered over the landscape. There are no barns in the fields, and no buildings whatever outside the towns, excepting on the tobacco, sugar, and indigo plantations. There are sometimes sheds on high poles in the rice districts, but these are used merely as watch houses to keep the birds away from the crops. The people walk long distances to their work. They labour in gangs, and are sometimes paid a part of the crop, bringing the shares of rice home with them from the harvest. Almost every house has a rice granary near it. This is somewhat like a corn crib sloping outward as it goes up, and ending in a thatched roof, which makes it quite picturesque. The rice is stored away in the sheaf and the women thresh it out as needed with pestle and mortar.

Rice is raised in every district in the island. It is as important to the Javanese as wheat is to us. If the crop failed there would be a famine immediately. Enough cannot now be raised for the enormous population, so that shiploads have to be imported every year. The rice-fields are tilled just as in the days of the Hindoo supremacy, notwithstanding the fact that the Dutch officials have tried again and again to introduce more modern and productive methods. The natives say that the present system has done very well for several thousand years, so why change it?

I visited the great Mohammedan mosque here at Bandong, and through my interpreter had a chat with some of the priests in charge of it. The mosque is a beautiful white building, with many white columns upholding its porticoes. Before it is a little stone-walled moat with enough water in it to make sure that visitors will enter the sacred precincts in their bare feet, thus at one time saving their shoes and observing the Moslem rule. I was told that I could enter the mosque if I would come in barefooted, so I took off my shoes, waded through the moat and tramped up the wide steps of this shrine of Mohammed. Here I met an old fellow in a long gown and white turban, who went with me through the mosque. We walked up the steps into a room about two hundred feet square, lighted from the top by heart-shaped windows covered with wrought-iron gratings. The floor was of black marble and at the back was a pulpit of white and gold, where the Imam stood and called out the prayers. Upon the mats before this pulpit several barefooted Javanese were rising and falling in their devotions. The pious Mohammedans here, like all the Faithful everywhere, pray five times a day. They begin at daybreak and pray again at noon, at three-thirty, at six, and at night.

The mass of the natives are, however, very loose in their religious observances. Their Mohammedanism is mixed up with superstitions and ceremonies which they got both from their heathen ancestors and from their Hindoo conquerors. The men seldom go to the mosque, and their religion is more like that of our Sulu Islanders than that of Arabia and Turkey. The head of it is the Sultan of Solo, the ruler of one of the two native states of

The homes of the villagers are little low huts usually containing only one or two rooms. Beside nearly every house is the family rice granary built upon stilts and shaped like our own corn cribs.

Before the telephone linked together all parts of Java signals and messages were transmitted from village to village by beating on a series of hollow log drums. Patrolmen in many places still sound them hourly during the night.

central Java. This man has a position similar to that of our Sultan of Sulu. The people look up to him and have faith in his divinity. Their respect increases, however, with distance, the Mohammedans of Solo being more lax even than those of western Java.

Among the features of Javanese Mohammedanism is an abhorrence of pork. The people will not eat this meat, for they consider it unclean. Not long ago a native chief had a Mohammedan killed. He was supposed to be a saint. After his death the people defied the chief and began to pray over the murdered man's grave, whereupon the chief buried a hog in the grave and the people prayed there no more.

The Dutch officials tell me they have more trouble with the Mohammedan fanatics than with any other class of natives, and for this reason they discourage pilgrimages to Mecca. It is found that the people look up to the Hadjis, as those who have made the pilgrimage are called. They think the Hadjis have supernatural powers, and the Hadjis use this feeling to create trouble with the government. Indeed, nearly every rebellion in Java has been fomented by these men. The mere fact that the Arabs come from the land of the Prophet gives them a certain prestige among the natives. In the Dutch East Indies Holland has to deal with forty-odd millions of Mohammedans, so that disturbances in the ranks of Islam mean problems for the Netherlands. At Jidda, the port in Arabia through which Mecca pilgrims pass, there is a special Dutch consul to look out for the ten thousand Moslem devotees making the journey every year from Netherlands India to the birthplace of the Prophet.

Right next to the mosque at Bandong is the home of

the native Regent, a Javanese who receives besides his good salary from the government many presents from his own people. I don't know how large his total income is, but it must be enormous. He has the disadvantage, however, of having to support all his relatives. Whenever a native gets a fat office or makes a rich strike of any kind his poor relations from everywhere come and settle down upon him. This is true in many other parts of the Far East, especially in China, where a rich man often has to support hundreds. In Canton, for instance, I met one millionaire who was keeping four hundred of his sisters, cousins, and aunts, and their little ones, and gritting his teeth as he did so.

The Regent of Bandong has a regular colony of buildings about his house for his kin-people. He gets as many of them as he can into the government service, thus relieving himself. He lives well and, I venture to say, spends the greater part of his income.

Outside the city of Bandong there is a race track a mile long with a fine grand stand and hundreds of bamboo sheds, or shelters, on poles near by. In these sheds the natives sit cross-legged to watch the races. The grand stands are given up mostly to the rich, the nobles, and the Europeans. At the races horses from all parts of the island take part. Some of the native chiefs have their own stables, especially the Sultans of Solo and Djokjakarta. There are often 50,000 people present at the meetings. The racers are Australian horses and ponies from Java and the surrounding islands. The ponies are found best for ordinary travel and they are used largely by the army. They can get over the rice lands where the heavier horses would sink through.

And this brings me to the roads of Java. They are by all odds the best of any country in the tropics; and that despite the fact that Java is on the edge of the Equator in one of the rainiest parts of the globe. Long ago the Dutch organized a system of road construction and forced the natives to carry it out. The labour due the chiefs from the natives was applied to road building. Each man was required to work so many days a year on public improvements. With forced labour the tyrannical old governor, Daendals, drove a road all the way across Java, from the west to the east, in two years. To-day most of the roads are macadamized. They are ballasted with stones broken to the size of a nut and rolled smooth with heavy iron rollers.

The drainage is perfect. Each side of the highway has a gutter in which there are openings every here and there for the water to flow off and culverts carry the streams under the roadways. In some places, in order that the irrigation system may not be disturbed, the streams are carried across high above the roads.

During a ride with the Controller of Bandong I passed many piles of volcanic pebbles gathered from the stream-beds and brought to the roadside. He pointed out that each pile was numbered and that the controllers knew to a cubic foot just how much each contained. This ride was behind a team of high-stepping ponies on a road as smooth as a floor, shaded with tall kanari trees, their branches interlacing overhead to make an arbour many miles long. So far I have not found a road that is not shaded. Some of the trees grow to a height of a hundred feet and a walk is not unpleasant even at midday.

At short intervals there are rest-houses or police sta-

tions, little shelters about six feet square with tiled roofs upheld by white pillars. Each shelter has a wooden drum upon which the patrolmen are required to pound every time they pass during the night. This custom dates back to the beginning of the nineteenth century when Daendals decreed that every hour there should be beats on the *tong tong*, a kind of wooden gong made from the hollowed-out trunk of a tree. Each *tong tong* was in hearing distance of its neighbours on either side, so that by this means all sorts of signals and warnings could be conveyed along the roads from one end of the island to the other. In Daendals's day, there were stations at regular intervals where fresh horses and postilions could be obtained, just as there are now places for fresh horses and automobile service stations at every five or ten miles along the main roads.

CHAPTER IX

HOW QUININE IS PRODUCED

THE Dutch are making fortunes in the manufacture of quinine. They have introduced into Java and Sumatra the cinchona tree, from the bark of which quinine is made, and are producing more than twenty million pounds of bark every year. This is over four fifths of the entire supply of the world, and the plantations promise to be even more profitable in the years to come.

The cinchona plantations are managed by the government, by syndicates, and by individuals. Most of those in private hands are on lands leased from the government for terms of seventy-five years. The planters are required to develop the properties, to pay rent in lieu of taxes, and to carry on their operations according to rules laid down by the authorities. The yield from the syndicate plantations, which have the most trees, is worth millions of dollars a year.

The government plantations are conducted more with an eye to the study of the cinchona tree and the extraction of the quinine from its bark than for profit, although they do pay. They are now raising about two and a half million pounds of cinchona a year and supply all the quinine needed for the Dutch army and navy.

But before I describe the government experiments, let me tell you something about the tree whose bark supplies

the little pill that takes away our fevers. The cinchona tree came originally from the eastern side of the Andes. There is a strip of country about a hundred miles wide and over two thousand miles long, extending from Venezuela as far south as lower Bolivia, which is spotted with cinchona groves. The trees are far in the interior and hard to reach. I have seen something of them during my travels in South America. The bark is cut in the forests and carried for many miles on the backs of donkeys to the rivers or the seaports. I saw a great deal of it at La Paz where it was brought to be shipped by rail to the coast. A donkey load weighed from one to two hundred pounds, and at that time was worth thirty-two dollars. One of the Bolivians offered to sell me a forest of 800,000 trees for $64,000, or eight cents a tree. Others of whom I inquired told me that they had plunged in cinchona and lost heavily. Some years ago there was quite a craze at La Paz for such speculation. The cinchona, or Peruvian bark, as it is sometimes called, was then selling around two cents a pound. A number of plantations were set out, and about $3,000,000 was invested in them by the people of La Paz alone. Then the price fell, and now it hardly pays to cut the bark from the wild trees in South America, although the labour conditions of Java are such that the trees can be cultivated at a profit.

It was about three centuries ago that Europeans discovered that the bark of the tree which the natives of Ecuador called "quina quina" would cure malaria. Countess Chinchón, wife of the Spanish viceroy at Lima, from whom the tree gets its present name, was miraculously cured of a fever by using the wonderful bark. She took some of it back to Spain, while her husband

sent an expedition into the forests to find out more about it. In the party was a Jesuit priest, who spread the knowledge of the bark among the brethren of his order and they sent parcels of it to Rome to Cardinal de Lugo. He distributed it to Jesuit priests throughout Europe. It thus became known as "Jesuits' bark" or "Cardinal's bark," and, consequently, suffered from a great prejudice on the part of the Protestants.

Until about the middle of the nineteenth century it was supposed that the cinchona tree would grow only on the Andes, and the people there thought they had a monopoly of the quinine business. The various South American governments taxed all exports of the bark. It was shipped to London, where it was handled by a trust, which raised and lowered prices at will. Then the English decided to introduce the trees into Ceylon and India, and the Dutch planned similar experiments for Java.

Both countries sent scientists to Peru and Bolivia for seeds and plants. The natives there impeded these men in every possible way. The Peruvian custom house officers would not let the English specimens leave the country, and one of the Bolivians poured boiling water over some seeds ready for export. After a time, however, both seeds and plants were secured for Ceylon and Java. The British set out large plantations in Ceylon, and also around Madras. They chose about the same latitude and climate as those in which the South American trees throve, and succeeded in producing trees the bark of which yielded a fair quantity of quinine.

The Javanese government started its plants first in the botanical garden at Buitenzorg, and afterward put them out at Bandong and elsewhere. They experimented for

some time, and finally discovered that the tree best suited to conditions here is the red-bark cinchona which grows to double the thickness of a man's body, and to the height of about fifty feet. In 1860 they had only 7000 of these trees. They have now many, many millions. The Java trees are of exactly the same variety as those used in India, but the planters tell me that the Java bark produces far more quinine than the India bark, and that the trees yield differently according to soil and climate.

Bandong is the centre of the best quinine-producing region of the world. It has also a factory where the bitter powder which kills the malaria is extracted. Before 1898 all the bark had to be sent to Europe, where the quinine was prepared by manufacturers who had formed a trust and could thus regulate prices. It was to meet this situation that the factory was established here.

The cinchona plantations are in the mountains at about 3000 or 4000 feet above the sea level. I can see their rich red colour spotting the hills as I ride about, and in places I see the natives taking up the trees or stripping off the bark. The soil here is very rich and there are frequent rains all the year around.

The most scientific methods prevail in the cultivation of the quinine estates. I have discussed them with the planters, and also with the director of the factory. They all tell me that the trees must be planted just so, and the greatest care taken to enrich the soil. Oil cakes, especially those from the castor bean, are used as fertilizer. The ground is carefully cultivated and the plants are set out according to the methods the government experiments have proved to be best.

The young cinchona plants are transplanted from nurseries to hillsides carefully prepared so that the drainage will be good and the soil light around the roots. The young trees require much sun, rain, and wind.

Successful cultivation of the cinchona tree requires the most careful attention and the plantation manager must spend much of his day in the saddle. He is constantly aided by the work of the government experiment stations.

The plants are raised from seeds sown in forcing beds. The seeds are much like flax seeds, so small that one ounce will produce some twenty thousand plants. After the sprouts have grown about four inches high they are transplanted and later on transplanted again into the places where they are to stay.

At first the trees were set out wide apart, but now they are planted at every three or four feet. As they grow, alternate trees are cut out from year to year to give the others more room. The bark of those cut out is used, so that the plantation begins to produce something within a short time. In the third year, the first crop may be taken by reducing each tree to one stem and removing all the lower branches, and the cutting continues until the tenth year, when the trees are full grown. In taking out entire trees the roots and branches are saved, for both yield quinine, although the best comes from the bark of the stem.

Experiments to enable the cultivator to get his bark as cheaply as possible resulted in the discovery that if it were removed from the trees in alternate strips, a new layer was formed in one year richer in quinine than the original bark and equal in thickness to that of two or three years' ordinary growth. This is commercially known as "renewed bark." This method is most common when the cinchona tree is seven or eight years old, when the bark comes off easily. The annual yield of quinine increases until the eleventh year when the maximum is reached. The bark is dried in the sun or in evaporators and then packed up and sent to the factory to be made into quinine.

The factory director tells me that about a thousand

trees are planted to the acre and that on the government plantations there are single trees which will yield as much as sixty-four dollars' worth of quinine a year. At that rate a thousand trees would yield sixty-four thousand dollars, perhaps the greatest profit per acre of any crop known. Even though it required ten years to grow the whole crop this would be equal to $6400 per acre per year. Divide this by four and you would have $1600 per acre, which is by no means a bad return.

The biggest quinine factory of the world is the one in the city of Bandong. It is under government supervision but is run as a private enterprise. The bark is delivered in bales of two hundred pounds. Each bale is carefully analyzed by the government chemists to find the percentage of quinine which it contains. After this the planter gets a check for the value of the bark less the toll taken by the factory. I went through the different departments of the plant watching the processes of reducing the bark to quinine. As it comes from the tree it looks not unlike ordinary bark, but when you taste it, it is like biting into a pill. Much of it comes to the factory in dust, and it is all pulverized before the extracting process is begun.

The dust looks like cinnamon ground fine. It is reddish brown, but each brown grain incloses some of the white atoms we know as quinine. The white powder is got out by mixing the dust with water and boiling it in great vats of steel into which a sort of kerosene refuse is put. There are steam pipes running through the vats keeping the oil at almost 200 degrees Fahrenheit. Soon the bark dust dissolves, and the quinine atoms separate from it and are taken up by the oil. After twenty hours all the

quinine has left the dust and become a part of the oil.

The oil is next drawn off into other vats, where it settles. It now looks for all the world like clear water, but it is really kerosene oil full of quinine. The next thing is to get the quinine out. This is done by introducing sulphuric acid. The acid takes up the oil but rejects the quinine, and when the oil and acid are drawn off, the bottom of the vat has a sediment like dirty white sand. This is crude quinine. It is clarified or refined much as we refine sugar, and at the end comes out in the frosted silver, flaky powder known as pure quinine. Packed in tins of one hundred ounces it is shipped to New York, Amsterdam, London, and the other great drug markets.

The experts here tell me that 90 per cent. of all the world's quinine comes from the Dutch East Indies, and that the greater part of this is from the neighbourhood of Bandong. They say a large amount of the product goes to the United States, and that the American demand steadily increases.

Scientists report that large areas in the Philippines are adapted to cinchona culture, and especially the island of Mindanao which is almost as large as Java. It has some of the richest soil of the tropics, and contains mountainous regions not unlike the Preanger district, where I am now. There is a small experiment station at Butuan and the prospects of producing quinine in the Philippines are bright.

At present something like 16,000,000 pounds of quinine are used in the world every year. This is enough to give every man, woman, and child three two-grain pills, an amount which is manifestly not enough to counteract the

malaria and the mosquitoes. In times of war, famine, and pestilence the demand increases, and prices fluctuate accordingly. During the World War quinine went up from twenty cents to a dollar and a half an ounce.

Once while I was in Ecuador quinine saved my life. I had gone up to the foot of the Andes through a vast tract of flooded country which swarmed with malarial mosquitoes. For two days I went about in a canoe through the tops of the trees, being bitten all the time by these insects, and upon my return to Guayaquil I was taken down with a bad case of *pernicioso*, which is somewhat like the Chagres fever. I had a native doctor who gave me from thirty to sixty grains of quinine at a time, and this killed the organisms and kept me from dying. Later on I met in Argentina one of our consuls, who had been stationed for some years in the city of Pará, at the mouth of the malarial Amazon. I told him of my experience with the fever and also that I was going up the Amazon. He warned me to saturate myself with quinine before I got there, saying that the fever germs could not live in cells containing this drug. I did so, and though I travelled two thousand miles among the mosquitoes of the Amazon I had no sign of malaria.

Besides cinchona, Java has another valuable tree which should do well in the Philippines. This is the teak, which grows on the lower and less-fertile hillsides in those parts of the island where there is a dry monsoon. In western Java, where the rain is more evenly divided throughout the year, few teak forests are found. The wood furnishes the principal lumber source of the island, being used for shipbuilding, furniture making, and railroad ties. It resists the white ants, which destroy other woods.

In gathering the bark of the quinine tree bamboo or horn knives are used, as steel discolours it. Some cinchona plantations have a thousand trees to the acre which may continue to yield for ten years or more.

Once all the cinchona bark had to be sent to Europe for the quinine to be extracted. But now much of it goes from the plantation warehouse to the big quinine factory at Bandong.

For nearly a hundred years the government has made a regular business of setting out teak plantations, allowing the natives to grow crops between the rows. After five or ten years, depending on the growth made, the first thinning takes place and the forest is generally ready for cutting within eighty years after planting.

At Samarang is one of the biggest and best-equipped saw mills in the South Seas. At first many American mechanics and foremen were employed to install the equipment and direct the native crews. But they did not understand how to handle Javanese labour and were so rough in their treatment of these docile little brown men that the management had to send them home. There was similar trouble when American foremen and drillers were brought over to help develop the Javan oil fields.

Since I have been here at Bandong I have had some friendly talks with one of the important officials in the Preanger district. He tells me that the Dutch are watching with great interest our methods in dealing with the Filipinos, which are, in some respects, quite different from the way the Hollanders handle the East Indian natives. He thinks we treat the Filipinos too much as equals. Said he:

"In that you are making a mistake. They are not your equals. They are children, and you are doing as much wrong as if you were to tell your little boy that he is as strong in body and brain as yourself. The Filipinos will not understand you, and you will do yourselves and them a damage which it will take years to repair. We endeavour to impress our superiority on the natives. They have been accustomed to look up to their chiefs, and we want them to do the same to us. Of course, we try to

let them advance in every way as rapidly as possible, and it may be that in time we can treat them differently. At present they are as happy as any people of their kind anywhere. They do not suffer, and travellers say they are the most prosperous of all the natives of the Far East."

When he went on to speak of the land system, I realized that indeed the government looks out for the native's best interests and throws every safeguard around him. He explained:

"The land here nominally belongs to the government, and we really have control of most of it. We hold it for the natives in case the population increases so that it is needed to feed the people. We will then dispose of parcels to small proprietors or in some way get them back to the Javanese. We believe it is our duty to keep title to the lands out of the hands of speculators. The Chinese especially are anxious to acquire estates, and, once in their possession, they work them solely for their own benefit, and do not care if the natives are impoverished. They will establish stores on their lands and keep the labourers in debt by giving them credit and paying them in goods. This would mean the practical enslavement of the natives. You see the Javanese are much like children. They have no care for the morrow and no idea whatever of accumulation. If we allowed them to have the lands outright, as soon as they got hard up they would sell them to the Chinese or to Europeans. The long-term leases, under which the big properties are now worked, may be obtained in Java only by residents of Holland or of the Dutch East Indies, and trade partnerships established in the Netherlands or in Netherlands India.

"In some places the native village, or *dessa*, holds land as a community. When this is the case the local authorities assign portions of the *dessa* land to such men as will pledge themselves to pay certain taxes, to keep the roads and irrigation works repaired, and to guard the gates or patrol the streets at night. In the cultivation of these fields they are also obliged to follow the rules of the *adat*, or ancient custom, and such other regulations as the village council may lay down.

"Moreover, whoever of his own free will reclaims a piece of waste ground acquires possession of that tract and may hand it down to his heirs. As a general thing the natives prefer to have the soil held in common.

"At any rate," ended the official, "I have told you enough to show you that in Java a native who wants to work is sure of having plenty for himself and his family. We have no paupers here in the sense in which we have them in Europe."

CHAPTER X

ACROSS JAVA BY RAIL

RAILWAYS in Java! Yes, hundreds of miles of them! I have just been travelling on the trunk line which crosses the island from Batavia to Surabaya, a distance about as great as that from Boston to Pittsburgh, and I write these notes at the station of Maos, about halfway between Java's two biggest cities.

The Dutch have five times as much railroad in the East Indies as we have in the Philippines. Their lines are the best of their kind, and although they are almost on the Equator, that red-hot belt about Mother Earth's waist, they are built to stay. Java is one of the most mountainous islands in the world and one of the wettest. Here it never rains but it pours; nevertheless, the roadbeds and embankments are so constructed that they withstand the tropical torrents. In many places the banks are walled with stones, and in others they are criss-crossed by bands of stones two feet wide. There are many culverts, as well as stone drains, plastered and whitewashed, so that they form white lines running down the green banks.

This is an irrigated land. For hundreds of years before the Dutch came the Javanese had terraced the mountains and conducted the water in aqueducts from one hill to another. In building the railroads the irrigation system had to be preserved, and in places the water is now carried high over the tracks. Sometimes there are waterways

If you will imagine a garden as big as the state of New York, as well kept as Central Park, and supporting a population equal to one-third of ours, you will have an idea of the size and beauty of the island of Java.

A million and one-half acres of Java are already irrigated, with further projects under way. The government sees that the big estates owned by Europeans do not get all the water, but that plenty is provided for the farms of the natives.

The Dutch have in the East Indies five times as much railroad mileage as we have in the Philippines. Besides tunnelling many mountains, the engineers have had to build embankments able to withstand the tropical torrents and floods.

above and below the roads, and not infrequently I passed a great tank from which the water was syphoned from one side of the track to the other.

One of the difficulties of the railroads here is keeping down the vegetation. The roadbeds must be kept perfectly clean, and the grass on the embankments is shaved like a lawn. The tracks are ballasted with rock protected by little walls of cobblestones four inches high which form a gutter outside the line.

Not only the trunk lines, but all of the steam roads of Java are well built. Not long ago I went over the line from Djokjakarta to Magelang. This road, which is about forty-eight miles long, pays well on account of the heavy shipments of tobacco and sugar from the plantations through which it runs. It is built on high embankments throughout most of its course. It has some steep grades, and is crossed above and below by drains and artificial waterways. I was interested in the protection of the bridges by huge crates made of bamboo filled with stones. Imagine a bamboo basket as big as a freight car, filled with boulders of various sizes, thrown into a stream above a bridge to break the flood, and you get an idea of this kind of protection. The baskets of this sort are of all sizes. They are used to hold up the embankments and to prevent washouts.

The stations are better kept here than in the United States. They are well built, being made of stone and stucco, covered with whitewash, and roofed with red tiles. Each one has a home for the station-master, with a lawn and a garden and palm trees and tropical flowers. Many have post offices connected with them, and all have telegraph offices and telephones. The ticket agents are often

Chinese, who are the cashiers of the country, and handle the greater part of the change.

The cars are first-, second-, and third-class, the natives generally taking the latter. The fares are low and the third-class tickets make up the largest part of the receipts. All the railroads together take in about $32,000,000 a year.

Every station has its first- and second-class waiting rooms and each has a restaurant where a fair meal can be had for from fifty to seventy-five cents. The expresses between Batavia and Surabaya have dining cars. On other trains the food problem is well handled. Before reaching the meal-stations the conductor telegraphs ahead and orders dinner, or one can have him wire for food to be brought aboard. Such meals are served in sets of porcelain boxes, which rest one over the other, a half-dozen boxes comprising an ordinary luncheon. These boxes usually contain hot soup, meat, or vegetables, and these dishes with fruit make up the menu. A servant brings the food into the car and waits upon the passengers while they eat, getting off at the next station, to go back on another train with the dishes.

Let me give you a picture of the first-class compartment which I had in coming to Maos. It was about as wide as our cars at home, but not more than ten feet in length. It was, in fact, a little room about six by ten, walled with glass at the sides and entered by a door at the rear. It had four seats at the corners and two armchairs of mahogany and wicker. The compartment contained also a leather sofa, which could be put up or down at will, and a table a foot wide and four feet long. My fellow passengers were four portly Dutchmen clad in white duck. One of them monopolized the sofa, lying there on his back, with his fat

abdomen shaking like jelly under its expanse of white linen. The other three Dutchmen were smoking and chatting. They spoke English and I found them good fellows.

The compartment beyond this was for the second-class passengers. Here were half a dozen Chinese dressed in white duck and gorgeous with rings and scarf pins. All had gold watch chains and all carried canes. There were also some of the poorer Dutch, including a couple of women, who wore *sarongs* and slippers in Javanese style, and a pretty girl with beautiful eyes, a ravishing smile, and a face so dark you could tell she had native blood in her. The third-class cars had plain wooden benches. They were crowded with natives, women and men packed in as close as sardines. I had a servant with me and I sent him third-class. I paid extra on all over sixty-six pounds of baggage and my trunks cost almost as much as my fare.

From time to time the conductor came in for the tickets. He opened the door without noise and moved about like a ghost, for he was in his bare feet. His costume was a calico *sarong*, reaching from his waist to his ankles, a navy-blue jacket, and a turban over which he wore a cap. He put his hand to his forehead as he entered our car and again raised it in salutation as he examined each ticket. There were barefooted porters at every station and barefooted cabmen ready to drive us to our hotel at about half the rate charged by the hotel cabs. There were no newsboys on the trains and nothing was sold while the cars were in motion. But the latest Dutch dailies are to be had at the stations, and are also on file in every depot reading room.

My trip through the island has given me a good idea of the country. I cannot describe its beauties. There is

no land like it on the face of the globe. I have visited the picturesque parts of India and the valley of the Nile in the winter when everything is the greenest of green, but I have never seen anything like Java. If you will imagine a garden as big as the state of New York and as beautifully kept as Central Park you may have a faint idea of it. But you must add volcanic mountains green to their tops, which are lost in the clouds; you must put in feathery bamboos, groves of coconuts, and orchards of bananas, and vast meadows on which buffaloes and ponies are feeding. The hills are terraced with rice fields, some covered with the golden grain ready for harvest and others with emerald sprouts on the silvery face of the waters. I have seen mountains with ten thousand steps of rice terraces. From the rice fields my train shot into great tea plantations, through groves of red quinine, and on into dense woods.

I have spoken of the railroad stations being white. Indeed, Java is all green and white. The Dutch seem to be enamoured of whitewash, not only in Holland, but in their colonies. All their buildings here are coated with newly slaked lime. The villas of the cities are dead white. The bridges are white, the fences along the roads, whether they be made of bamboo fishing poles or of heavier wood, are covered with whitewash, and the same may be said of the drains and the culverts, the warehouses and the factories, especially the vast sugar mills, which spread over acres and which have white smokestacks standing out against the blue sky. White, in fact, is so much the fashion that the people whitewash as we clean house, putting on a new coat at least once and often twice a year. The rainy season from November to January covers everything with damp and mould. After it is over the smell of lime

fills the air; then the buildings don their white summer dresses. Some of the larger hotels keep whitewashers busy all the year round, as do also the big property owners. The white fashion extends to the clothing of the foreigners. The Dutch officials dress in white duck. They wear white canvas shoes and white helmets, and even the military officers wear white.

Among the picturesque features of my trip were the little bamboo huts of the natives, which look like playhouses set in their groves of banana palms. I crossed magnificent roads dotted with coolies, bare to the waist, trotting along with baskets fastened to the ends of the poles resting on their shoulders. Some of the poles had ends turned up like bows. They were borne by men carrying rice in from the fields. Other men had loads of goods which they were taking from one town to another. There were women thus loaded as well as the men, and I saw hundreds of young girls carrying burdens in bags on their backs.

CHAPTER XI

IN THE RICE FIELDS

THE chief crop of Java is rice. Coming across the island I was never out of sight of rice fields. The grain grows on every hillside and in every valley. It must have water, and the irrigation works built to supply it are unequalled in any part of the world. The volcanic mud which forms the soil of Java is as rich as guano, and also of such a nature that it can easily be made into the walls which divide the flooded patches.

The larger canals are stone walled and well built with many locks, but the water drips from field to field as the little mud embankments are opened by the farmers. In many places I saw the people at work. Here they were planting and there they were harvesting the rice. The lands are ploughed and weeded by the men, but the planting and reaping are done by the women. The rice is set out plant by plant in the flooded fields, the women wading through the mud up to their knees as they set in the shoots one by one. Much of the farming is on shares, a man and his wife agreeing to plant and harvest a patch for one fifth of the crop. I see crowds at work in the ripe grain. The men and women are toiling together, especially the young men and the young women. Each stalk of rice is cut separately with a little knife held in the fingers. The stalks are put together in sheaves not much bigger around than a man's leg, to be taken home and threshed out at leisure.

The government has tried again and again to get the natives to use the sickle, but they persist in the use of the knife. They say that Sri, the goddess of the harvest, took the form of a rice-bird, which broke off the ears with its bill, thus teaching mortals the manner in which it pleased her to have them gather her gift of the rice. Besides, why should they save time? The Javanese no more wants to save time than he wants to save fresh air and sunshine. He has plenty of it already. "Haste cometh of the evil ones," says he.

At the beginning of the rice harvest the people have picnics and feasts. They put up temples in the fields to the goddess of the harvest. Each temple is about as big as a pigeon house, and the offerings consist of eggs, fruit, flowers, bits of sugar cane, and cooked rice flavoured with spices. The native places at these shrines the things he most likes to eat. Besides the offerings to Sri he makes others to the gods that make the soil fertile, to the shades of his ancestors, and to the guardian spirits of the village. He believes that the celestial beings are satisfied with just the smell of food, so, after the gifts have remained awhile on the altars, he and his friends have a feast.

When the rice is nearly ripe, shelters are erected on poles in the fields and children or grown-ups are stationed in them to watch the crop and to scare off the birds. Sometimes strings are stretched from scarecrows in different parts of the field, and by manipulating these the boy in the shelter can frighten the birds a half mile away.

Harvest time is the chief courting season and many weddings take place just after the crop is gathered in. A native wedding is a great occasion, especially in the interior and in the hill country, where the old customs are

more strictly observed. The matter of the bride's dowry having been settled between the parents, and the usual presents of food, clothes, and cooking utensils having been sent by the groom, the couple start preparing for their marriage. The groom goes to the mosque every day and there, standing up to his chin in the cold water of the mosque fountain, recites the marriage formula to the village priest. Meantime, the bride has been living on a diet of three teaspoons of rice and a cup of hot water a day until she is almost thin enough for a candle flame to shine through her.

On the wedding day she has her hair soaked with oil and twined with jessamine wreaths, her face whitened with rice powder, and her bare shoulders and arms coloured with yellow *boreh* salve. The groom, whose teeth have been freshly filed and blackened with lacquer, is likewise decorated with *boreh*, jessamine, and silver ornaments, and in this state he rides up to her door. The bride goes forth with her two maids of honour to meet him. When they are a certain distance apart each throws at the head of the other a bag containing siri leaves, chalk, and betel nuts. If the bag of the bride strikes the man in the face, it is supposed to be a sign that she will rule the home. But, however that may be, she next kneels and washes her new husband's feet in token of submission. After this, he conducts her to a strip of matting, upon which she squats down, holding up a handkerchief. Into this the groom throws some rice, some beans, and some money, symbolizing the support he must furnish his wife. The ceremony is concluded by the groom's putting into the mouth of the bride three spoonfuls of rice made into little balls, and himself eating what is left in the dish.

Rice grown in the wet fields is far more productive than that of the dry lands. The wet lands are usually worked at the beginning of the rainy season, and require neither fattening nor manuring.

In the hope of good crops the natives make frequent offerings to Sri, the rice goddess, and other deities. They seize every opportunity for these rites which always end by the worshipers themselves eating the sacrificial sweetmeats.

"I passed some fields where the golden grain was ready for the harvest and others where the emerald shoots covered the silvery face of the waters."

The Dutch are unable to induce the natives to use modern machinery or methods in their rice culture, which is a mixture of practical knowledge and all sorts of superstitions.

As the rice lands supply the food of the natives, the Dutch government watches them carefully. It insists that no contracts made shall interfere with their cultivation, and it provides that they shall be taken care of for the people. It aids in their irrigation. In fact, it is largely due to the government's watchfulness that Java, although one of the most densely populated parts of the globe, does not have famines.

The natives are childishly improvident. Were they not protected, the Chinese or other capitalists would corner the rice and hold it for high prices. As it is, every one has all the food needed, and there is but little distress and no begging.

Some of the rice lands are owned by the villages, and are rented out to the rich planters. In such cases only one half can be let, the remainder being kept by the village for rice, and no rice land can be leased for longer than five years at one time. I met a Dutch indigo farmer not far from Maos who told me that his estate was leased from the Sultan of Djokjakarta, but that he was forced to keep half of it in rice. His labourers worked only a certain number of days of the week and but a part of the day, devoting the rest of the time to their rice lands.

I asked this man something about the wages and hours of work of his men. He told me that the average day was ten hours and that they worked from six to twelve and from one until five and sometimes later. He pays them a few cents a day. In the cities wages are about twice as much as on the country estates.

Yet, despite the low wages, the only poverty-stricken natives are those in the parts of Java where opium is still smuggled in in large quantities. Samarang, the poorest

district in the island, is reported to consume one hundred thousand dollars' worth of the drug every month. The Javanese there, like the Chinese, complain that they cannot do any work without their little opium pills. Once when the government stopped its importation into the island of Banka, the twenty-five thousand Chinese coolies in the tin mines struck. They had no energy unless supplied with the drug. The Chinese merchant declares that he takes it in moderation and looks on it much as the business man of Great Britain regards his wine or his whiskey and soda.

Among the Dutch East Indian natives the inhabitants of the island of Bali are the most addicted to opium. When the Chinese introduced it, the Balinese were using hashish, which had been brought in by the Hindoo conquerors. This narcotic, made from the tops and tender parts of Indian hemp, is a powerful intoxicant. A story is told that when a certain rajah of Bali found himself in the hands of the Dutch, he dosed all his wives and himself with hashish and then they all ran to their deaths on the bayonets of their conquerors.

CHAPTER XII

THE INITIATION OF A PRINCE

THIS part of my trip is like a journey through a land of the Arabian Nights. In the native states of Java the scenes are stranger than those of the days of Haroun al Raschid in Cairo and Bagdad. Princes and nobles in gorgeous costumes strut through the streets with their women servants and slaves following them. Some go about under huge umbrellas of gold, silver, or cloth of bright colours. The common people drop down on the ground as they pass and look up in reverence.

I am at Djokjakarta, the capital of one of the native states, ruled by a sultan whose great palace is within its limits. The Sultan's city is surrounded by white walls twenty feet high. It contains magnificent buildings, the homes of the princes, and an enormous harem, as well as the houses of the nobles and servants of the court. There is a menagerie of tigers, lions, and other wild animals, besides state elephants for His Majesty's processions.

This potentate has a number of titles chief among them being Amangku Buvana, "the Person Who Has the Axis of the World on His Knees." More than fifteen hundred people are connected with his court, and he has soldiers, slaves, and treasures galore. He maintains the same state now that his ancestors had hundreds of years ago, for though the Dutch rule his province, they do so through him, making the people believe they are obeying the

Sultan. It is the same with the great adjoining state, that of Surakarta, where lives the Sultan of Solo. In the past these sultans ruled the whole island, and they are still looked up to by the Javanèse. The Dutch appreciate their power, and keep the hand of iron concealed in the velvet glove with which they handle the natives. Right in front of the palace inclosure there are barracks filled with Dutch soldiers, and about the whole is a moat with drawbridges which can be lowered or raised. The palace is fortified, and there are cannon on the walls, nominally to protect the Sultan, but so arranged that they could be easily turned on his palace and shatter his imperial city to pieces.

The Dutch Resident has the same standing as the Sultan. He sits beside him on public occasions and his chair is on a level with that of the native ruler. The Sultan sends word to the Resident every morning asking how he has rested, and the Resident replies with like formality. When the Sultan goes out in state he has gorgeous gold umbrellas held over him by his servants, and the Resident calls on the Sultan with similar umbrellas shading his head.

Through my letters from the Governor-General of the Dutch East Indies I was invited by the Resident to attend a great function at the palace of the Sultan. It was the initiation of one of the princes into a rite of the Mohammedan religion, and all the court and the highest of the Dutch officials were expected to be present. Before my invitation was given I was asked if I had an evening suit and white necktie, although the ceremony was to take place at seven o'clock in the morning. When we started from the palace of the Resident at six-thirty all our party

The royal swimming pool is only one of the luxuries in the palace enclosure of the Sultan of Djokjakarta. There are residences for the ruler and his chief wife, barracks for his toy army, and quarters for his many wives and concubines.

Pangeran Poerbojo is the son of a sultan, but not being the first-born of his father's eighty-six children he does not sit on the throne. He and his wife live in good style on their share of the royal revenues.

The old mosque at Kudus is an object of pious pilgrimage because of its tomb of a sultan. But the chief royal cemetery is on a hill near Djokjakarta where sleep four hundred princes of the ancient line.

were in full dress. There were a dozen rich Dutch planters, several officers of the army, each of whom was resplendent in gold lace and trimmings, and also the civil officials, who wore evening clothes. The party was more like a group of the best-dressed men at a diplomatic reception at the White House than you would expect to find on this island, generally supposed to be a jungle of savages, rhinoceroses, tigers, and snakes. We rode to the palace in state escorted by thirty-two European guards of the Sultan. Mounted on fine black Australian horses, they always accompany the monarch when he goes out of the palace. They are stationed inside his city, ostensibly for his protection and under his control, but in reality as a guard to prevent revolution or conspiracy against the Dutch rule without.

Our procession was, I judge, at least half a mile long. The Resident, surrounded by his guard, rode at the head in a splendid carriage drawn by four high-stepping, fawn-coloured Javanese ponies. His coachman was in livery, and his footmen stood beside him carrying the great golden umbrella. Behind came the Assistant Resident, a fine-looking Hollander, in a coat stiff with gold braid, but with a more modest umbrella. He also had four horses. Farther back were other four-horse turnouts. Then came the less-pretentious two-horse carriages, containing the planters and visitors, among them myself, each with its coachman and footmen.

It was a sight to see how the natives kept dropping down to the earth and looking up at us as we dashed along the avenue of wide-spreading trees which leads from the home of the Resident to the *kraton*, or palace city of His Majesty. We went through a big gate, and by a crowd of

Javanese soldiers and officials, who straightway squatted until our procession had passed. We drove across a great court inside the walls and finally stopped before another gateway, the entrance to the palace grounds proper. Here there were officials wearing high white-and-black sugarloaf caps not unlike those worn by the Parsees. Each cap was vizorless and about eight inches high. It was the exact shape of a sugarloaf with the top chopped off, and was made of some semi-transparent material which looked to me like paraffine wax.

From the ears to the waist the native officials were perfectly bare, for according to court etiquette no man must wear a jacket or anything around the upper part of his body while in the palace of the Sultan. Every one of them had a gorgeous waistcloth belted about him falling from his waist to his thighs and under this a pair of tight pantaloons. Each man had a great knife, or *kris*, with a sumptuous handle of silver or gold in his belt, and the richly carved metal gleamed out against the highly coloured waistcloth. We saw thousands of these men as we went on inside the palace. They made the *dodok* as we passed, and later on squatted about in front of the great pavilion where we were entertained by the Sultan.

This pavilion had a vast roof upheld by many wooden pillars, beautifully carved and decorated with red lacquer and gold. The Sultan was sitting upon a throne within it as we came up, and the Crown Prince stepped down from a lower seat and came out to the Dutch Resident and shook hands with him. As the Sultan saw the Resident he arose and stepped forward, the Dutch official moved toward him, and the two of them shook hands and sat down side by side. The rest of us merely bowed to His

Majesty, and were then conducted to seats behind him, which gave us an excellent view of the court.

The scene was a strange one. In front of us and to the left, extending on and on to the walls, was a sea of these half-naked nobles, each squatting on his haunches, with his white cap on his head. To the right, more in front of the Sultan, were as great a number of women, all bare-headed, bare-necked, and bare-shouldered, and all sitting on their heels. Each had a gay *sarong* wrapped tightly about her bosom, just under the arms, so that as I looked, I could see only the shoulders, necks, and heads of the women, the effect being that of a crowd of naked yellow beauties submerged to the armpits.

My seat was within ten feet of the Sultan, a tall, fine-looking old man, slightly stooped. He wore a black sugarloaf cap embroidered in gold, a black jacket which blazed with diamonds and medals, and a magnificent *sarong* below which shone slippers of gold. I admired his fine features and his high appearance. Just behind him stood a number of female slaves, each holding something for his use in case he might need it. One had a betel box, another a cigar box, and others articles of the toilet. Near him sat the Crown Prince, who also had five of his slaves about him. The Prince wore a blue silk jacket with his *sarong*. He had on a black cap, and his long hair hung down his back. There was a great *kris* in his belt, and as he came up to the pavilion his bare-backed servants carried an umbrella over him. I got a closer view of him going out. He is of a light yellow colour, having very bright black eyes. His teeth are jet-black and filed to a point, as are those of most of the women and men in the palace.

As we took our seats the Sultan's band started up. It was stationed at the back of the court, and played on sounding boards, drums, and bells peculiar to Java. Such a set of instruments is called the *gamelan*, and this particular set is used only on rare occasions. It is of such great antiquity that the instruments have become mellowed with age and make beautiful music.

Next the chief actor of the day appeared. This was the son of the Sultan who was to be made a full-fledged Mohammedan through certain ceremonies performed by the priests in little tents of white silk in front of the pavilion where we sat. The boy was just fifteen years old. He came into the court bowing low and sat down cross-legged in front of the pavilion facing His Majesty. He was richly dressed in green and silver. He wore a jacket of green silk, a scoop-shovel hat of green satin, and a *sarong* of green and silver. He fairly sparkled with diamonds. His arms were bare and also his legs from the knees to the feet, but his skin was dusted with a yellow powder which glistened like gold as the rays of the rising sun fell upon it.

After the Prince had sat there a moment the Sultan raised his hand and the boy started to go to his father. He first took off his sword and laid it on the ground, for none dares approach the sovereign with arms on his person. Next he folded his hands in an attitude of prayer and bowed low. He then crawled forward a few steps and again bowed as in worship. He kept on crawling and bowing until at last he had reached his father's feet. Here he knelt again in reverence and kissed the instep of the foot his father thrust out and then the knee. After this he crawled back to his former posi-

Only ruins are left of the ancient glories of the Sultan's Water Castle at Djokjakarta. It was built on an island in a lake and was reached by an underwater passage.

In the *wayang* shadows of gilt and leather puppets thrown on a screen enact some old story of the Hindu tradition. At intervals there are dances to music from the weird-sounding instruments of the native orchestra.

The officials in Java are known by their umbrellas. Only the sultans may use the golden umbrella, while the native regent, or governor of a province, has one of green, edged and mounted with gold.

tion, never rising to his feet. This form must be observed by all natives who approach the Sultan. Even the nobles must creep along on their haunches and heels and the prime ministers do the same.

After this the boy was taken in hand by the Mohammedan priests and conducted to the pavilion, the band playing a weird air as they went. The religious rites were performed behind the curtains, while the Mohammedans prayed, and at its close the thousands outside broke into songs of rejoicing.

The ceremonies ended with the serving of tea and cakes to the party in the pavilion. The Sultan, the Dutch Resident, and all Europeans took part in this feast. We drank tea grown in Java out of cups of beautiful china, but the Sultan and the Resident drank from cups of gold.

Then we said good-bye to His Majesty; and the Crown Prince and the Dutch Resident, with their retinues, marched out together, with the rest of us bringing up the rear.

CHAPTER XIII

WITHIN THE SULTAN'S PALACE CITY

I HAVE spent a large part of to-day exploring the *kraton*, or palace city of the Sultan of Djokjakarta, or Djokja, as it is more often called. I took a carriage and drove through the gates of His Majesty's municipality and then went up one avenue and down another, going through hundreds of acres covered with the houses and huts of the nobles and servants of the court.

I passed by great trees trimmed in the shape of umbrellas. They had foliage like boxwood, but their branches and leaves formed an umbrella-shaped mass as large as a haystack. Imagine the biggest haystack you have ever seen trimmed to the shape of a wheel of green one hundred feet or more in diameter and twenty feet thick resting upon a great round trunk, perhaps twenty feet high, and you have a picture of one of the two waringen trees in the square which one crosses after entering the gateway to the walled enclosure.

The royal palaces are enormous structures of one story with many rooms. The throne room is decorated entirely in gilt and attached to it is a dining hall which can accommodate one thousand guests. The home of the Sultan himself is a yellow palace, opposite which is the home of his first lawful wife. Near by are the dwellings of his concubines and of his bodyguard, and also the stables for his elephants and horses.

The Sultan has a big harem. He has the right to take any woman in his kingdom to wife, and when the daughters of the nobles reach a marriageable age they are brought to him and he picks out such as he chooses and directs that they remain in the palace. The nobles are anxious to have their daughters in the harem, for a pretty girl is sure to get her father and brothers good fat jobs, as well as to elevate the standing of the family.

Passing His Majesty's zoölogical garden, where a couple of the young princes were watching the lions, I stopped for a time at the band stand, or rather the music building of the palace city. It was an open shed with a pyramidal brick floor rising in steps toward the centre. Within it a score of musicians were sitting cross-legged on mats, going through their practice. Some had barrel-like drums on their knees, others had gongs and series of bells upon which they were playing chimes. One of the gongs was as big as a bushel basket and gave forth a sound like a bass drum. The golden-faced musicians wore high sugar-loaf caps, navy-blue jackets, and *sarongs* of peculiar patterns. They played solemnly but sweetly. As I waited the smell of opium came to my nostrils and I found that one of the band was taking a smoke during the breaks of the playing.

In another place I saw three old men sitting chatting together. They must have been high officials, for they had black stove-pipe caps on their heads. There were servants about them, and as often as one of the officials required anything a servant crawled up, stooping low that he might not be as high as his master, and bowed his head to the floor as he received the command. He then crawled away on his knees or heels to get what was wanted.

Everywhere throughout Djokjakarta these ceremonies between master and servant are observed. Every native official has an umbrella held over him as he moves about, and the streets are full of processions of nobles and slaves. A noble is not supposed to do anything. He will not carry anything in his hand, and so a servant must go along to bear the lead pencil or the paper of a high mogul such as the court scribe. When a noble calls upon a Dutch official he is not supposed to wear his cap and he leaves it outside in the hands of his servant. The servant often puts it on while waiting, but to show that he wears it only as a slave he turns the vizor to the back of his head instead of to the front.

In the United States when a great man comes into a house or hall the audience rises to show respect; in Djokja they squat down in the *dodok*. The kiss of reverence is always on the instep or sole of the foot or on the knee, as I have described it in the case of the young prince.

When the Sultan first got his European carriage, the servants were horrified to find that the seat of the coachman was higher up than that of His Majesty. This would never do with a native driver; so at first a foreigner was employed to drive the Sultan's outfit, in order that this problem of etiquette might be solved.

The rank of a native dignitary or Dutch official can be told by his umbrella. Only the Sultan and the Residents have golden umbrellas. The Queen and the Princes can have yellow umbrellas, and the more distant relatives of the royal family and the concubines have the right to carry white umbrellas. The nobles have green or red umbrellas, and some of the lowest officials carry black ones. These parasols are not like ours. They are much larger and are borne on poles from ten to fifteen feet high.

Wherever the Sultan goes his attendants carry along the royal seat, a stool or bench of gold with a velvet cushion. When he moves abroad numerous emblems of his rank are taken in the procession and arranged behind him when he is seated. Among them are always the small golden figures of an elephant, a snake, a bull, a deer, and a cock. Besides these, there are golden boxes for tobacco and betel nut, and golden cuspidors, bowls, and salvers. These are all much-prized heirlooms of the royal family.

Near the *kraton* is the old Water Castle of the early sultans. In its spacious grounds are the ruins of a great palace that had swimming-baths, fountains, flower gardens, and orchards. Once upon a time this palace and its grounds stood in the middle of a lake and the only entrance to the building was through a passage under the water. Of this nothing appeared above the surface except the towers in which were windows for lighting the tunnel. One day in Daendals's time the Sultan, secure in his water castle, sat whiling away the time with his harem and his musicians. Meantime the Governor had arrived in the outer court to keep an appointment with His Majesty. After he had sat for an hour cooling his heels and growing more and more furious as he listened to the sounds of music and laughter coming through the tunnel, he could stand it no longer. He pushed past the guards, stormed down the passageway, and appeared before the Sultan. Seizing "the Person with the Axis of the World in His Lap" by his hair, he dragged him back to the Dutch headquarters where the interview took place.

Unfortunately since the earthquake of 1867 made it uninhabitable, the picturesque old stronghold has been allowed to fall into ruins and it will not be long before all

traces of it have disappeared. Squatters now build their huts in its compound.

At Djokjakarta, the seat of the oldest empire in the island, one sees the real aristocracy of Java and observes many of its typical customs and amusements. Among the latter are the *topeng* and the *wayang*. In the former, actors in queer masks with long, pointed noses silently act out old stories recited by a reader. From the colour of a mask the spectators can tell at a glance whether the actor is taking the part of an angel, a devil, a prince, or a mere mortal. The masks are used to avoid the appearance of breaking the Moslem rule which forbids the representation of the features of man, whether painted, photographed, carved, or by actors on the stage.

The *wayang* is a kind of miniature of the *topeng*. In this the places of the actors are taken by jointed puppets of brightly gilded and painted leather, whose shadows are thrown on the screen as they are moved about to enact the story read aloud. In the intervals there are dances and songs to the accompaniment of the *gamelan*. On one side of the screen of white cloth, the side with the puppets, sit the men, while on the other squat the women. Both kinds of entertainment last for hours, and sometimes even run from day to day, but the natives never seem to tire of them no matter how old or well known the story. Nowadays they are great lovers of moving pictures, too, and the movie houses in the cities are always crowded. The Europeans sit in front of the screen as we do, and the natives watch the pictures from the other side.

Cock-fighting is another amusement of the Javanese, many of whom keep fine birds. They make bets on the matches, though this is strictly forbidden by the Dutch

government. Their strangest sport is the cricket fight. The crickets are caught, preferably near the grave of some Moslem saint or hero, put into tiny bamboo cages, and trained for the arena. With a fine brush of grass-blossoms the trainer tickles the insect's head, sides, and back until he is teased to the point where he will fly at the brush and hang on to it with his strong jaws. This shows he is in good condition for the combat. For several days he is fed on rice sprinkled with red pepper and then taken to the meet. The two cages are placed over against each other, both crickets are stroked with their masters' grass-blossoms, and when the cage doors are opened they rush upon each other. The one first thrown, or who first turns tail and runs away is vanquished, and the other is declared the winner.

CHAPTER XIV

THE WOMEN OF JAVA

COME with me to the bazaars of Djokja and take a look at the business women of Java. They do the greater part of the buying and selling, and they are as sharp traders as you will find anywhere. The only women like them are those of Burma, who look and act much the same.

Most of the retail trade of this part of the world is done in great bazaars, somewhat like a vast department store under one roof. The only differences between our department stores and the bazaars are that in the latter each counter is in charge of a merchant who owns the goods piled about him, and that there are hundreds selling the same kind of goods in the same place.

Some of the most interesting bazaars I have seen in Java are these at Djokjakarta, where the natives hold fast to the customs they had when the Dutch first came to the country. This is a large city, and its bazaars cover many acres. They consist of vast sheds roofed with thin brick tiles, which are green with the moss of old age. In one section there are nothing but coal merchants, sooty-faced girls squatting on tables in the midst of piles of charcoal. Each girl has a bundle of banana leaves beside her, and her measure of value seems to be what one leaf will hold. The leaves are about as large as a sheet of fools-

The entrance gates of the palace enclosure at Djokjakarta front on a large public square in which waringens, the trees of the nobility, have been trimmed in the shape of great royal umbrellas.

Portable restaurants and drink stands are everywhere in Java. The native's heaviest meal is eaten at home at mid-day, but breakfast and supper are often taken at the out-door refreshment booths that line the public squares, the roads, and the river banks.

When the rice grows too thick the women wade into the water and mud and thin it out, tying the uprooted plants into little bunches which are carried to another field for re-setting.

Rice fields in all stages of cultivation from planting to harvest are seen next to each other throughout the year. Setting out the young shoots is considered women's work, while the men usually do the ploughing and weeding.

cap, and a leaf full of coal sells for two cents. Strips of rattan fibre serve as string.

Next to the coal sheds are the vegetable merchants, and farther on are fruits, bamboos, chickens, and eggs. The vegetables are sold in piles. We see one heap of five potatoes, each the size of a walnut, which we can have for one Javanese cent, equal to two fifths of a cent of our money. The same merchant has two piles of string beans and a little heap of tea which she is selling out by the tiny cupful. Her total stock is worth not more than twenty-five cents of our money.

The cheapest things of all are the fruits, which are of every tropical variety. I come home every day loaded with mangosteens, bananas, oranges, and pineapples, and my chief drink is coconut water, which I buy of the coconut peddlers in the bazaars. There is a little brown coconut seller who has the freshest of green nuts always on hand. She sells them for two cents apiece, and opens them up with a cleaver so that I can drink the sweet milk fresh from the shell. I assure you it is a drink for the gods.

In the chicken market one can buy a good pair of broilers for a shilling. In a shed here there are hundreds of cages of pigeons of all colours. The cages are of bamboo, each about as big around as a flour barrel and a foot or so high. All are filled with pigeons, selling for two cents and upward apiece. The woman peddling them is also selling whistles, to be tied to the tails of the pigeons, so that they may make a whistling noise as they fly through the air. This is one of the customs of Java. I saw the same thing done in northern China, the whistles being fastened to the tails of the birds to scare off the hawks. Four little whistles may be bought for ten cents, and the Java-

nese maiden who sells them takes out one of the birds and fastens a bright red whistle to the roots of its tail feathers to show how they are used. The whistle is tied round one or more feathers, so that it stands upright in the tail, catching the wind as the bird flies, and making a shrill noise.

The Javanese breed many pigeons. In the villages I have often seen houses with pigeon coops, little native huts in miniature, set up on poles beside them.

In the Djokja markets the women act as cashiers and bankers. In every bazaar I see them squatting behind little tables, with pennies and half-pennies and all sorts of silver and copper coins piled up before them. The chief business of these women is making change. They charge one cent or more for each gulden, so that the lowest rate is one per cent. They are backed by the Chinese, who furnish the capital, and pay them so much a day for their work. The Chinese do a large part of the retail business of Java. They have nearly all the stores which require any capital to operate.

It strikes me as odd to see women butchers, but there are scores of them here. They sit cross-legged on mats behind tables a foot high loaded with mutton and beef in all sorts of chunks and slices. Each woman has a long, sharp-pointed knife, with which she cuts according to order. The scales are seldom used, and the meat is sold at so much a slice, little regard being paid to which part of the animal the meat comes from.

There is a great deal of fish sold in the markets, especially dried fish, which is cooked in rice and other vegetable stews. There are pieces of bullock skin sold for the same purpose, and in the rice markets are hundreds of yellow-

faced girls with plug earrings sitting behind piles of white rice which they measure out in coconut shells at so much a shell.

The women are the chief buyers in the markets, and they seem to keep the family purse. The purchases everywhere are exceedingly small. A nickel will buy food enough for a family meal, and a cent is the cost of many single articles. I stood one day and watched a woman buy some dried fish of a Chinese. The fish was cut up in pieces no larger than a postage stamp and about half an inch thick. The woman had picked out five of these pieces, examining them carefully to see that they were good, and finally laying them to one side. She put her hand on them and offered the merchant a cent. The Chinese took up the fish and wrapped it in a banana leaf, leaving out one of the pieces. The woman refused to take it, and she fought for ten minutes in her effort to get that extra piece, the value of which, reduced to our money, was just one fortieth of a cent. The next buyer bought two cents' worth, getting eight little cubes of salt fish, and while I watched, a full half hour, I judge, there was no purchase of more than a nickel in value.

Sometimes the bazaars are in the form of a hollow square, the roofs upheld with white pillars. In the centre of the square is a court filled with market men and women, who have temporary shelters to shield them from the sun. The bazaars proper are paved with red brick; they extend in one long aisle lined with stores around the great square. The goods are spread out on little counters, piled up on the floor, or hung up behind the merchants, or more often, if I may use the term, merchantesses, who squat on the bricks.

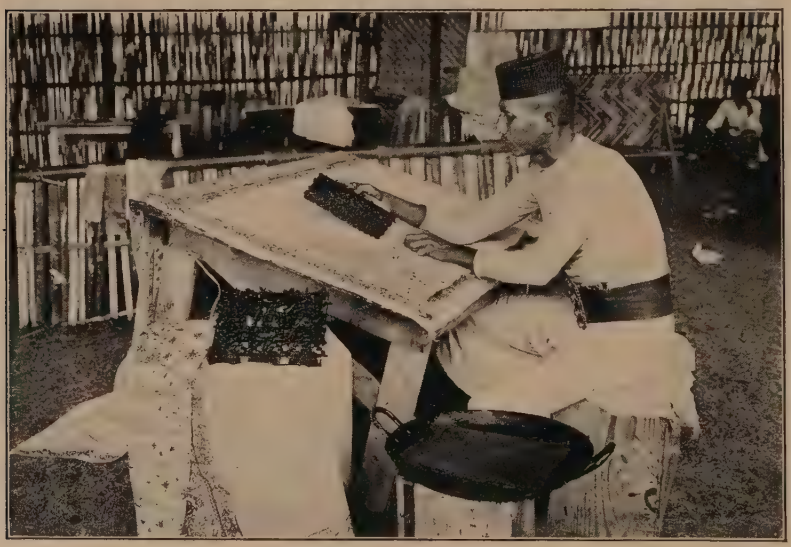
One section is given to the cloth sellers. Here the gayest of calicoes hang on poles about the walls. Blue, red, and yellow goods of all kinds form a striking background to the brown-faced, bare-ankled, bare-footed women, who sit there and sell. Farther on are the tailors. There are dozens of shops, each owned by a male or a female dressmaker. How an American tailor would laugh at the sight! They use sewing machines, but many of them are worked by hand, and rest flat on boards on the floor, and not on stands, as with us. Here is a girl sewing on a silk jacket. Now she has stopped and is reeling a spool of pink silk on the bobbin. She holds the machine between her toes as she works. She is bare-armed and bare-shouldered, and has beautiful hands.

In the next shop is a prettier woman, dressed in a cream-coloured jacket and bright red *sarong*. A fierce Malay, wearing a turban, a red jacket, and a black skirt, sits beside her. It may be her husband or possibly a customer waiting for that garment on which she is sewing. Notice how much jewellery the woman wears. She has a half-dozen bracelets of silver and a bracelet and three rings of gold. Her jacket is fastened at the breast with a great medallion of silver from which hang long chains, and she has a silver belt around her waist.

Leaving the tailor shops, we go on to the drug stores. These are in little sheds roofed with palm leaves upheld by poles of bamboo. In each shed is a table just about as big as a double bed and about as high from the ground. In the centre of the table is the druggist, surrounded by goods in little flat baskets. Her feet are tucked under her, and the chances are that she is chewing tobacco or betel nut as she does business. The baskets, which are of all

From the family supply of rice, stored in the shock, the women pound out the grain with pestle and mortar as needed. Rice is the chief food, and completion of the harvest is marked by general rejoicing.

The famous batik cloth of Java is made by applying by hand designs in melted wax. Certain patterns, such as the "hunting scene," are reserved for royalty alone, for whom an army of workers is always employed.



Cheap imitations of the handmade batik done by women are being produced by men using brass patterns dipped in hot wax. They copy their designs from the handmade goods, or sometimes from the calico prints of Manchester mills.

sizes, are filled with various kinds of roots, nuts, and powders. One basket contains a white powder, and others rose leaves, cloves, pepper and spices, ginger, and every conceivable thing. As we wait, a woman comes along with a baby who looks pale and ill. The druggist sizes up the little one with her eye and then gives the mother about a quart of various medicines and tells her to boil them up into tea for the sick infant.

Farther on we stop in the tobacco bazaar. Here the business is done by both women and men. Tobacco is sold in great quantities in cigarettes, in cigars, and in the lump, or in rolls twisted like ropes. The wrapping paper is a banana leaf fastened together by a thorn pinned through the ends. Sometimes the bundles are tied with strands of dried banana peel. Banana leaves and banana peel and thorns serve as the wrapping paper and twine of the whole market, and all sorts of goods are done up in them. There are stalls which sell nothing else, the merchants coming there for their leaves and thorns as needed.

One of the shops at Djokja is run by a Dutch society for the encouragement of native arts and industries. The most important of these are the making of *krises*, some as splendid as those I have described as being used at the Sultan's court, and the printing of *batik* cloth. Every true Javanese who can afford to do so wears *batik* and carries a *kris* in his belt. Djokjakarta is the centre of the *batik* industry, which in its original and artistic form is entirely in the hands of women.

I have seen many women at work printing *sarongs* and head cloths. Each *sarong* is about two yards in length and about a yard wide. It is merely a strip of fine

white cotton upon which the designs are sketched out by the printers. The figures are made with melted wax flowing from a little funnel-like brass implement. It must be carefully put on, for after it has been applied, the dye will take only in the unwaxed parts of the pattern. Some of the patterns require weeks and months to complete, and the skirts, when finished, are almost as costly as an American gown. In the beginning the strip of cotton is perhaps worth thirty cents, but in the hands of a fine artist it may be so printed that it becomes worth thirty dollars or more. The commoner designs sell for two or three dollars, but there are many which are very expensive. The dyes used are from the plants and the fruits of Java. Indigo furnishes the blues, the bark and rind of the mangosteen give the cinnamon brown and burnt orange, and extracts from the bark of other native plants and trees are also employed. The work is very hard on the eyes, and I have noticed that many of the women wear spectacles.

There are streets in the bazaars which sell nothing except these *batik sarongs*. Those worn by the men are much the same as those of the women, and there are millions of such skirts sold every year.

The styles and designs used vary in the different sections and towns of Java. The Djokja *batik* is known by its rich chestnut tones on a dark blue or cream-white background, and is perhaps the finest. That of Solo, with its darker brown, burnt orange, and black designs is also beautiful. In Samarang one sees brighter colours, though no Javanese designs show the brilliant shades of American-made *batik*. Experts can tell by the *sarongs* of the natives from what part of the island they have come. In addition,

there are certain designs reserved for the native royalty and the Sultan of Djokjakarta has among the thousands of women in his *kraton* his special *batik* workers. These, like his maids of honour, are all old women, so that there may be no cause for jealousy on the part of his numerous wives. No one can be a maid of honour until she is seventy. The Sultan's wives often make *batik* as a kind of fancy work.

Besides this slow and artistic handicraft *batik*, another sort has of late been introduced. For this, designs made of brass are dipped in hot wax and stamped on the material. This form of the industry is in the hands of the Arabs and Chinese and is done entirely by men. There is such a demand for the material, not only in Java but in Ceylon and India as well, that cheap imitations are now being turned out by the looms of Europe.

The Javanese women occupy a position similar to that of the women of Japan. One sees them labouring in the fields, cultivating the rice, picking tea and coffee, and working at every trade along with the men. In the markets they act as porters, going about with baskets slung to their shoulders and backs. They have a queer cry, a sort of "Ye! ye! ye!" as they walk along with their burdens; this is a warning to the people to get out of the road. They will carry your marketing a mile for a couple of cents and be glad of the job.

Girls marry very young. They are often mothers at eleven or twelve years of age, and old maids are almost unknown. The whole family takes care of itself, and the more children a poor man has the better off he thinks he is. It is not uncommon for a woman to have a dozen children, although owing to their neglect of the laws of hygiene

the families are not as a rule much larger than ours. Many of the children die in infancy.

The Javanese mother is entirely ignorant of the proper feeding of her baby. She mixes up a mess of rice and bananas, then lays the baby across her knees, and proceeds to stuff lumps of the mixture into its mouth, pushing it down the throat with her thumb. When she judges that the child has enough she wipes off its tears, puts it back into the sling she wears across one shoulder, and rocks it to sleep.

I am told that the women believe in love potions, and that there are witch doctors who sell stuff which, put into the food or drink of the man of her choice, will turn his affections upon the woman who wants him. The women are very jealous. They understand poisons as well as love philters, and such of the Dutch officials and soldiers as form matrimonial alliances with native women are careful in breaking them, for desertion may bring about a terrible revenge from the "woman scorned."

The Javanese woman spends much time upon her teeth; not in making them white, but in giving them the jet-black hue fashionable among the natives of this part of the world. Both here and in the Philippines both sexes blacken their teeth, and almost every tribe has its special method of filing them. In Mindanao I saw hundreds of men and women who had them hollow ground, just as though they had taken a rat-tail file and scooped out the front of their teeth. In Java the men sometimes file their teeth to a point, so that the upper and lower jaw resemble two ragged saws, the teeth of which fit into one another like a steel rat trap. The women file their teeth off straight and sometimes cut them down at the sides so that they

The native metal-workers hammer out good designs in copper and silver relief for betel nut and tobacco-boxes, bowls, and belt-clasps. Heavy combs and earrings of gold encrusted with gems are made for the richest people.

One reason the Dutch government has pushed its irrigation projects so as to make the soil more productive is the rapid growth of its population. It is increasing at a rate unequalled anywhere else in the world

are almost square. They laugh at the mouths of the foreigners, and say that we have teeth like dogs, for dogs have white teeth. They sometimes file off or pull out the canine teeth because they look like dog teeth. A well-filed set of teeth is a girl's badge of womanhood. It is her coming-out dress, as it were, and marks the change from girlhood to womanhood. After her teeth have been filed she is supposed to be ready for marriage, and the boys begin to make sheep's eyes at her. The filing, which is a painful ordeal, is not all done at once. It is first begun in the presence of a family party, and a feast follows. After this the teeth are blackened with a mixture of soot and iron filings, which makes them shine like polished jet.

The worst thing about the women of Java is their custom of chewing the betel nut and tobacco. As for smoking, I have seen women doing that in so many parts of the world that I have grown accustomed to it. It is different with chewing, especially betel. This discolours the teeth, fills the mouth with a blood-red saliva, and makes the tongue black. Tobacco chewing as done in Java is fully as bad. The women use enormous quids. I have seen girls with wads inside their mouths as big as the fist of a thirteen-pound baby. There is often a stream of yellow juice trickling down from the corners of the mouth, and altogether this is a disgusting habit.

CHAPTER XV

THE SHRINE OF A THOUSAND BUDDHAS

AWAY out here in the heart of Java, on the other side of the world, are some of the most wonderful ruins upon earth. I have just returned from a visit of exploration to them, and my pen halts as I try to describe what I have seen. I have looked upon the Parthenon at Athens, the Forum of old Rome, the myriad ruins of India, and the Pyramids of Egypt, but nowhere have I found anything like the remains of the old temples of Java. They are scattered over this region of the island where once flourished the great Hindoo kingdom of Mataram. Some of them cover many acres and some are miles in extent. The most wonderful of all lies within a few miles of Djokjakarta. It is known as Boro Budur, which means the "Shrine of the Many Buddhas."

Boro Budur is the greatest monument ever erected to Buddha. It surpasses the temples of Siam and the giant Buddhas of Bangkok. It is more wonderful than the Japanese creations in bronze and stone and larger than any Buddhist monument in China. Some of you have seen the Pyramids. The greatest of them is that of Cheops, the base of which covers thirteen acres and upon which several hundred thousand men are said to have worked for twenty years. If that be so the Boro Budur must represent the labour of more than half a million. It is not

quite so large as the Great Pyramid, but the work upon it was infinitely greater.

I have climbed the Great Pyramid at Ghizeh and have explored its interior by the light of magnesium wire. It is a huge mass of stones laid up in pyramidal shape. There are no decorations, no carvings, nothing but great blocks of stone.

Boro Budur is also pyramidal, but it is one mass of carving and statues. It rises in terrace above terrace of stone to a gigantic cupola more than one hundred feet above the base. At the bottom it is five hundred feet square and covers, I judge, from eight to ten acres of ground. All the terraces are decorated with statues and their walls with bas-reliefs wonderfully carved. It has been found by actual measurement that there are more than three miles of sculptured figures, some two or three feet in height, some no larger than your finger, all as exquisitely cut as though picked out with a knife by some patient Chinese. I counted in places eight different figures in a space a yard square, and such carvings continue right along around and around the terraces. Every figure must have taken weeks to make. The life work of thousands is in these carvings, each one of which could have been executed only by the hand of an artist. Every face has a different expression and some smile and frown as though alive.

But how came such a stupendous monument to be here on this hill in Java? In 264 B. C. a Hindoo king, Asoka, divided the ashes of the "Great Enlightened One" into eighty-four thousand parts and distributed them throughout the Buddhist world. Shrines, or *dagobas*, were erected to house these sacred remains, and Boro Budur is

such a temple. The top of a hill was cut off and the sides were terraced. The whole was then covered with a sheathing of stone. Boro Budur is not, as it appears, a solid mass of masonry, but a core of earth over which has been laid a shell of stone. There are no doors or windows or pillars or columns in the entire structure—simply tier on tier of galleries joined by stairways all leading to the platform at the top.

The four lower terraces are square, representing matter and the things of everyday life. The three upper terraces are circular and stand for the things of the spirit. On the circular platforms are seventy-two bell-shaped shrines. In each one is a Buddha and all face a central *dagoba* of similar design, which crowns the huge monument. These Buddhas sit inside the shrines behind stone lattice-work. It is believed that the central shrine was the one that originally contained the pinch of sacred ashes.

I haven't counted all the statues of Buddha, but I know there are five hundred large ones representing him sitting in the different attitudes he assumed when he prophesied, taught, and thought before he was translated to Nirvana.

In the walls of the lower galleries there are niches for the Buddhas, all facing outward toward the four points of the compass. On the east side the statues have the right hands touching the ground in front of the right knee, meaning: "I swear by the earth"; on the west side each Buddha sits with his hands in his lap in the attitude of contemplation; the images on the north side have the right hands raised palm outward to indicate promise; at the south the Buddhas have the palms of the right hands upward, in the attitude of teaching, meaning: "I give you

all." Around the walls are carvings representing scenes from the life of the Hindoo saint and sage.

The stories in stone about him in his various incarnations are particularly interesting. One of them tells how Buddha, being at that moment a turtle in the sea, sees a sinking ship surrounded by sharks. He takes the passengers and crew on his back and carries them to shore, where he offers them his own body for food. Another depicts how one day when Buddha is a woodpecker he meets a lion with a bone in his throat. This the woodpecker takes out and then flies away. Some time afterward, when the bird is almost famished, he comes upon the lion devouring a freshly killed antelope, which the woodpecker asks the king of beasts to share. The lion refuses and the woodpecker goes off accompanied by a fawn, who urges him to pick out the lion's eyes and take all he wants of the antelope. But the incarnation of Buddha replies that there is nothing like virtue and that he who acts well is sure to find his reward in the life hereafter, while he who returns evil for evil is sure to lose merit.

There are, besides, hundreds and hundreds of figures representing the life of the court and the common people of this island a thousand years ago. I walked along miles of elephants, peacocks, and monkeys. I saw all the vegetables and fruits of the tropics portrayed in stone. Stone peasants drove stone buffaloes as they dragged stone ploughs through the stone fields. There were stone men carrying stone rice upon their shoulders, and stone women bearing water jars on their heads as they did in the days of the Scriptures. There were dancing elephants and elephants carrying fans and state umbrellas. The life of the sea as well as of the land is depicted here.

Yes, I mean a thousand years ago! It is estimated that these ruins are at least ten or twelve hundred years old. The temples were constructed when Buddhism was at its height on the island. This beautiful carving was done when our ancestors in the wilds of England and Germany were eating with their fingers, living in huts, and sleeping on skins, and perhaps six hundred years before America was discovered or the people of Europe knew that Java existed.

But why did the temples not fall to pieces long ago? They lie in the heart of the tropics, on the edge of the Equator, and they are washed by deluges of rain. They have lasted partly because of their wonderful workmanship and also because they have been buried from sight under forest and earth. The stones are dovetailed and mortised and joined as closely as the finest mosaic, and though many of them are exceedingly small, they still hold together.

When the Buddhist religion was overthrown in Java hundreds of years ago it is supposed that the devoted Hindoo priests and rulers buried their shrines. In time trees grew upon them and for six hundred years they were unknown to the natives of this part of the world, just as the ruins of Pompeii were for long hidden from the Italians. The Dutch took possession of the island and kept it for several generations, but did not discover them. It was the English who during their short rule in Java found these temples. Sir Stamford Raffles kept two hundred men busy for forty-five days digging out one of them, and afterward the Dutch carried on the excavations.

But let me describe my trip to Boro Budur. From Djokja I went a half hour by rail, and then took a carriage pulled by four Java ponies. I had a coachman and also a

footman, whose duty it was to jump from his perch on the rear of the carriage and thrash the ponies into a gallop at every long hill. He sometimes allowed the team to walk on the level, but never when going up or down grade, and we went almost on the dead run over one hill after another until at last we came into a beautiful valley surrounded by mighty volcanoes. We dashed through a village of bamboo huts, pausing outside to see the great Buddha statue of Mendoet, and then went on through the valley until we came to the hill upon which the temple stands. My only stopping place was the rest-house maintained here by the government. As no one was expected, the manager was absent; but I found half a dozen servants and finally succeeded in scaring up a bed and a dinner of rice, fried eggs, and coffee.

I got my first sight of the monument from the steps of the rest-house. A wide avenue of kanari trees leads from the hotel to the temple. The branches of the trees meet overhead, making a great arbour reaching perhaps half a mile to the base of the monument. Between the trees all along this wide avenue are gigantic stone Buddhas sitting cross-legged, with their feet lying on their knees, and I looked past their peaceful faces through the trees at what seemed in the dusk of early evening a mighty pyramid of carved greenish-gray stone. As it stood out against the dark blue sky it appeared to be cut from one solid block, its ruined and broken condition being hidden by the distance.

My visit to the shrine was made in company with a Dutch civil engineer who went with me from Djokja. After dinner we sat and smoked until the moon rose, then strolled down through the avenue to take our first view of

the great monument by moonlight. Under the full moon of the tropics everything was plainly visible, but softened and mellowed by its rays. We had to walk carefully for fear of stepping on poisonous cobras, and we looked fearfully into the darker shadows before entering the terraces, expecting that we might see the fierce eyes of a tiger staring at us.

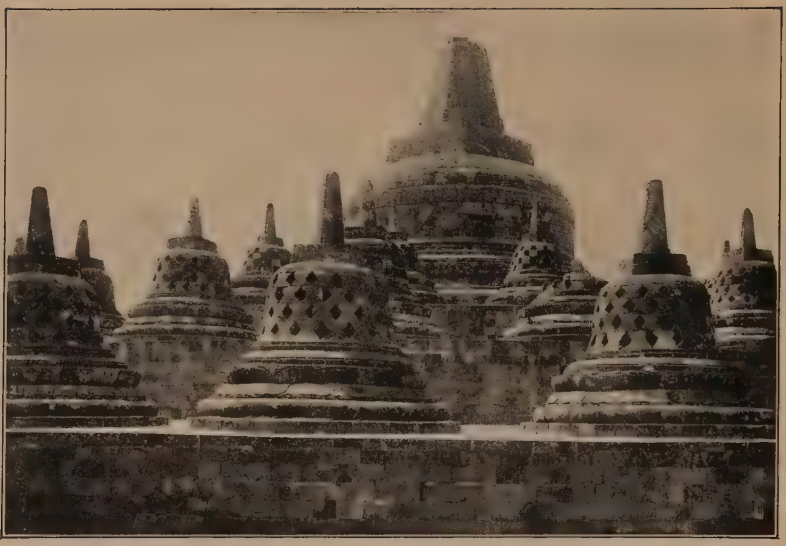
We stopped a moment at the steps of the pyramid to admire the giant statue of Buddha which sits there. Its features were so peaceful in the moonlight that they seemed emblematic of the Nirvana in which Buddha has rested for the last twenty-four hundred years. It seemed as pure and fresh as though it had been carved yesterday, and we could not realize that the image itself is over ten centuries old.

Passing up the steps, we climbed from terrace to terrace, to one gallery after another, tracing the carvings by the light of the moon, and at last reached the round platforms of the seventy-two Buddhas in their lattice-work shrines. We mounted higher and higher up rough stone steps, and finally stopped on the very top, with the vast monument below us.

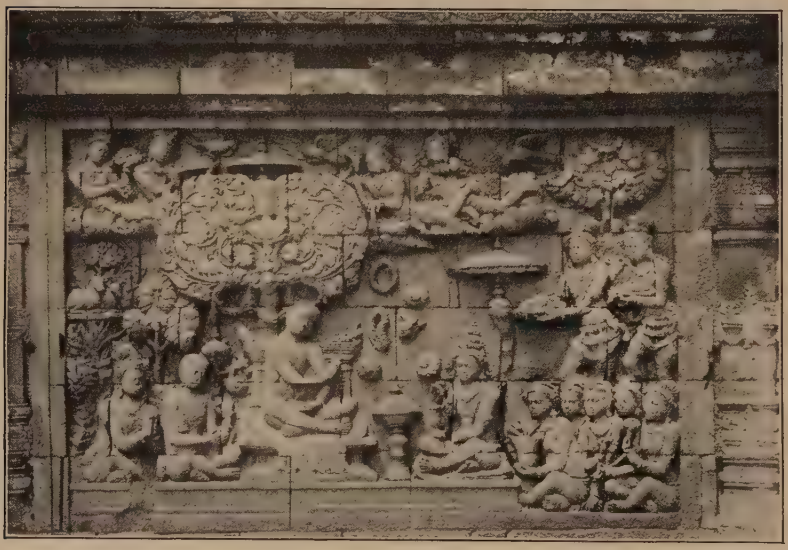
What a place for a temple or a tomb! We were on a hill in the centre of a great plateau surrounded by mountains, in an amphitheatre of the gods, on the very top of the mightiest religious monument ever erected.

As we stood there the full moon was just overhead. Clear and beautiful, it seemed to me that it looked down pityingly on that stupendous work of man, once so splendid, but now fast falling to ruins. It touched the broken outlines with tender hands and apparently smoothed them out and made the great pile new again. Under its

The temple of Boro Budur is the world's greatest Buddhist monument. In the four hundred and thirty-six niches in the terrace walls life-sized statues of Buddha sit serene on lotus cushions.



Crowning Boro Budur are lattice-work shrines, each containing a statue of Buddha, ranged around the central shrine, or dagoba. This is believed to have housed a pinch of the sacred ashes or perhaps a tooth of the Hindu saint and sage.



Three miles of bas reliefs cover the walls of Boro Budur. The frescoes of the lower terraces present scenes from the everyday life of the people, while those of the other galleries picture the story of Buddha from birth to Nirvana.

rays the Buddhas became life-like. The lines of carvings were vivified, and the whole was much more impressive than when we saw it on the following day in the blazing light of the tropical sun.

The scene was strangely peaceful, the air was as soft as a June night at home, and the breezes from the volcanic ranges about us whispered stories of the past as they swept over the ruins. We could hear the chirping of the crickets, the chattering of the lizards, and now and then the beat, beat, beat of the policemen marking the hours of the night on their wooden drums.

Coming down from the summit, we walked for miles about the carvings, studying the various characters and looking at the peace-loving Buddhas in their niches above us. Everywhere we went we saw the work of the iconoclast. In one or two places the lattice-work top of a *dagoba* had been removed, leaving the Buddha within exposed and looking rather as if he were sitting in a tub. There were hundreds of headless statues. Here a great sitting figure had been overthrown, there was one with its arm broken, and farther on another which had lost its toes and fingers, in order that some relic hunter might add to his collection. For generations both natives and foreigners have been robbing the monument. The lawns of some of the Dutch have been decorated with its images and the foreign soldiers have amused themselves by decapitating the Buddhas and carrying their heads away to use for target practice. Fortunately, however, the Dutch have now forbidden such vandalism and their archæologists are endeavouring to preserve the ancient Hindoo temples.

My next view of Boro Budur was at daybreak. We had the servants call us at five o'clock, and, after a cup of

coffee as black as ink and as thick as molasses, we walked over to the temple. The day was just breaking, and the huge pile looked ghost-like in the light of the early morning. It seemed half fort, half palace, and had I been in China I should have imagined myself in front of some mighty walled city.

I climbed to the top to watch the sun rise. Standing there, I could see it redden the clouds upon the volcano of Merapi. As I looked, the mighty mountain spouted up a great jet of vapour which in the sun became a fountain of gold. At the same time the clouds behind the mountain took on a roseate hue, and a moment later the big disk of the sun jumped up, as it were, into the sky and flooded the world with light.

The scenes of early morning in Java are unlike those of our country. Here I am in the atmosphere of the tropics, where the heavens lie close to the earth, where the moon appears larger, where the stars shed a light almost equal to that of the moon, and where the sun is always dazzling. On the dome of the temple, surrounded by its Buddhas, I seemed to be on a stone island floating upon a sea of vapour, which covered the plain in a thick fog. It banked up in billows at the foot of the mountain, making the whole plateau a sea of fleecy white dotted with green islands where the tops of the coconut trees rose out of the fog. This lasted until the sun appeared, when, as though by a wand, his majesty of the heavens cleared the mists away.

As I watched Mother Nature's gorgeous extravaganza the orchestra burst forth with the morning concert. The musicians were hundreds of birds, some no larger than canaries, others as big as robins, and others still larger. I could see the pigeons flying around us, the wooden pipes

attached to their tails making a whistling noise and thus scaring off the great crow-like birds and vultures hovering near. The birds flew about the monuments of the old temple, hopping from statue to statue, resting now and then on the nose or hand of a Buddha while they sang away with all their might.

As the sun rose higher the concert grew louder, and mingled with it came the busy hum always heard through the daytime in this island hive inhabited by 34,000,000 human bees. I could see the workmen going out into the fields, looking like ants on the landscape. Some of them drove along buffaloes, which in the distance seemed no larger than dogs, and gradually the green fields were spotted with little patches of white, the men and women who were beginning their labours among the crops.

Boro Budur is but one of the great ruins of Java. There are others scattered over this central region of the island. There are the remains of one hundred and fifty temples lying between Djokjakarta and Solo. About twenty miles from here are the vast ruins of Prambanan, while not far away from them is the site of the Chandi Sewu, or the Thousand Temples.

I have spent a long time in wandering about through this section. Prambanan can be reached by rail, and it is but a short walk from the station to the ruined temples, which I had no difficulty in finding without a guide. The ruins cover an area greater than the ground floor of the Capitol at Washington. They are surrounded by a grove of coconut and breadfruit trees, in which the birds sang as I walked from one stone gallery to another and photographed the statues. I mounted the steps of one huge pile of volcanic rock. The stone, which was cut into

blocks and carefully fitted together, was profusely carved. This building was, I judge, about forty feet high, and at the top was a great stone chamber roofed by the sky.

In the back of this chamber, upon a pedestal as high as my shoulder, was a most beautiful statue representing a maiden standing and looking down with sleepy eyes. The statue was, I should think, at least twenty feet tall, and reminded me of some which have been brought from Egypt and Nineveh to the British Museum. The lovely face had evidently been copied from life. The figure is called by the people here "the goddess with the beautiful hips." The name of this goddess is Lora Jongran. I sat down at her feet and rested, looking up into her eyes and hardly realizing that the langourous glance she directed at me was the same that those eyes had given for more than one thousand years.

I next examined the bas-reliefs on the stones outside. They are not unlike those of the Boro Budur, although they give stories of the life and deeds of Siva, the chief god of the Brahman religion. In the chambers below I found a great stone god with the body of a man and the head of an elephant. It was in a sitting posture, with the soles of the feet together. The carving was excellent, but the face of the fat old elephant god frowned, it seemed to me, as I looked at him through the ground glass of my camera.

Leaving this mass of ruins, I walked a couple of miles to the site of the Thousand Temples. Most of these have disappeared, but there is a stone platform reached by long walks. At each of the four entrances are huge figures. Each figure rests upon its knee and holds a great club in one hand and a snake in the other, while another snake

For centuries pilgrims and tourists have ascended the stairways from terrace to terrace of the "Shrine of the Thousand Buddhas." The beauty and finish of the carvings cut ten centuries ago remain among the marvels of modern times.

The Chinese have been in Java so long that the island is dotted with their temples and tombs. The Celestials know so well the native and his ways that they form the backbone of local trade.

is wrapped around over its shoulders. The figures are carved out of one solid block of volcanic rock, and although kneeling, are nine feet in height. I climbed up on the knees of one of them and from there got to the shoulder and with my tape line took the dimensions of the head. It measured just two feet two inches. A line across from shoulder to shoulder was forty-six inches. These stone guards are very grotesque with eyes about as big around as a baseball apparently popping out of their heads. They appear to wear wigs, which look not unlike the woolly hair sometimes seen in the South Seas.

CHAPTER XVI

THE SULTAN OF SOLO

THE Sultan of Solo is the greatest native ruler of Java. His names and titles are many. His two million subjects call him the Susuhunan, or Sultan, and he signs himself, "Paku Buvana," or "Spike of the Universe." All the people of the province of Surakarta, or Solo, look up to him as the representative of Mohammed and the intermediary between them and their God. This Sultan claims to be a far greater man than the Sultan of Djokjakarta, who is almost his next-door neighbour. Surakarta is the largest native city in Java and, like Djokja, has in the heart of it a huge palace inclosure in which live thousands of nobles, servants, and slaves. There are ten thousand people within the *kraton* of the Sultan of Solo.

Like the Sultan of Djokja, this Sultan also has one head wife and numerous concubines, as well as many female slaves and servants. The ladies of the harem seldom come outside the palace and are not seen by the men who call upon His Majesty. The Sultana, or head wife, often takes a party with her when she goes out driving, but at other times the looser forms of Mohammedan seclusion are observed. Most of the women in the palace are of the nobility, daughters of the native chiefs who esteem it an honour to be chosen as wives to His Highness.

I have described the dress of the ladies of the Djokja

court. It is much the same in Solo. According to law the thousands of women inside the palace must be décolleté. All the women there except the Sultana and the princesses leave their shoulders and arms perfectly bare. They have a special pattern of dress which must not be worn outside the palace, and their *sarongs*, although made of cotton, are very expensive. They are all decorated by hand by the artistic *batik* workers of the kingdom. The woman's dress is somewhat as follows: First there is a strip of cambric ornamented with original decorations and about three yards long and a foot wide which is wrapped round and round the body just under the armpits, binding the breasts so tightly that it is often injurious to health. The upper part of the shoulders and arms have no covering and there is a strip of bare yellow skin from three to six inches wide between the breast band and the skirt which forms the rest of the costume. The skirt is also bound very tightly about the body and the waist is considerably compressed. The Javanese girl is quite proud of her small waist and very particular as to the pattern of her *sarong*.

From the native's viewpoint, the Sultan of Solo controls all executions and to a large extent all the punishments of his people. His power, however, is more nominal than real, for the Dutch Resident here tells His Majesty how he should act, and the Dutch run all the courts and impose the fines. The other day I saw fifty men and women with ropes around their necks all tied together awaiting trial in front of one of the government offices. They were in the charge of native policemen and were surrounded by natives, but the judge inside the court was a Dutchman, and it was he who imposed the fines.

It was a curious sight. The fifty were roped together in such a way that one could not run without dragging the whole crowd after him. On the veranda in front of them were native scribes in turbans and *sarongs* with kris-like swords in their belts at the back. These were the clerks of the court. Each had beside him a great pile of coppers, the fines already collected and the funds for making change. The veranda was filled with natives of various ranks. I made my way through the crowd and was admitted to the court room. The judge was a good-looking Hollander dressed in white duck, with a handsome young native in turban and *sarong* squatting on the floor near his feet. The native was the prosecutor and interpreter. As I waited, a criminal was summoned. He was made to creep in on his heels and sat on them while he was cross-examined. The witnesses entered and sat about him in the same fashion.

As far as I could see, the Dutch judge did his best to get at the truth. He was looked up to more as a father than a judge, and this is the relation that the government tries to maintain with the people. The cases were petty ones. No fine of more than ten dollars was imposed while I was in the court room, and some were but a few cents. One man had been out without a lantern. A jealous woman was arrested for an assault upon her lover, and a very pretty girl was sent to prison for petty larceny. I watched the clerks paying the witnesses. They received two cents for each mile they had travelled in coming to the court, and were paid in coppers.

The Sultan of Solo has a large revenue. Nominally everything in his province belongs to him. He owns all the lands and rents out a considerable part of them to for-

Though the Sultan of Solo is allowed to keep a little army of his own, he is at all times accompanied by a troop of soldiers in the pay of the Dutch and cannot receive visitors or letters without the Resident's permission.

In the official ceremonial processions the Sultan walks arm-in-arm with his "Elder Brother," the Dutch Resident, and honours are carefully divided to give the appearance of equality of position and powers.

Except when performing before their sovereign, Javanese actors wear masks. The colour of the mask shows whether the character is representing angel or devil, hero or villain. Travelling troupes are eagerly welcomed in every town and village.

eign planters. With what he receives from the Dutch government, his income amounts to about one million dollars a year. He can levy taxes with the approval of the Dutch Resident and he keeps up a little army of his own. He has a cavalry troop of thirty Dutch soldiers, which always forms his escort, and which in case of trouble with the Dutch would promptly capture him and take him prisoner, for they are really the servants of the colonial government. But despite all the state he maintains, the Susuhunan and "Spike of the Universe" may not receive a visitor or a letter from the outer world without the Dutch Resident's permission. Nor can he go the least distance beyond his palace walls without the same sanction. Even in his own palace he is under the eye of these thirty white soldiers.

In the early days of the Dutch East India Company in Java the island was under the control of the powerful native state of Mataram. At last, in 1749, when the reigning "Emperor of Java," as he was then called, was at war with his brothers and also quarrelling with his sons, the company seized their opportunity. On his deathbed, the Susuhunan, Paku Buvana II, was compelled to give up his royal power. He signed a paper whereby "he abdicated for himself and his heirs the sovereignty of the country, conferring the same on the Dutch East India Company, and leaving it to them to dispose of it in future to any person they might think competent to govern it for the benefit of the Company and of Java."

For a while the Dutch allowed the Susuhunan at Surakarta to have all the forms of authority; but later on it was considered a good thing to divide the "Princely Lands" into two states, one with its seat at Solo, the

other with its capital at Djokja. By this time the empire of Mataram had shrunk until it embraced only about one fifteenth of the island. In principle the Sultan of Djokja was the vassal of the Susuhunan, and every year he had to meet the Sultan of Solo near Djokja, and render homage with imposing ceremonies, taking off his sandals and kneeling before his overlord. As might be imagined, this galled the Sultan of Djokja. The Dutch, however, did not mind a little soreness between their two puppet Sultans, as this kept them from putting their heads together to revolt. They even helped on the ill-feeling a bit. They whispered in the ear of the ruler of Djokja a way out of his humiliating situation. One year when the time came around for his interview with the Susuhunan, he appeared wearing a Dutch military uniform. Now, it had long been established that foreigners and those wearing the insignia of military rank under the Europeans need not kneel or make the *dodok* before any native ruler, no matter how great. So this time the Sultan of Djokja did not have to kneel and his overlord went back to Solo greatly put out but unable to exact any punishment for the offence.

As a final step in weakening the power of their two Sultans, the Hollanders installed at the court of each of them a native prince, with certain powers of his own and a fat salary. These princes have their own *kratons* besides those of the sovereigns, and each has the right to keep up his own private army on the European model. The princes and their armies are entirely under control of the Dutch, to whom they have remained loyal.

Furthermore, the Susuhunan had to hand over to the government his monopolies in all the most valuable

products of his state—coffee, teak, salt, minerals, and the trade in the nest of the sea swallow. This last, though not now a government monopoly, is still a thriving business. Large quantities of edible birds' nests are shipped every year from Java to China. These nests, which are about half the size of a woman's hand, consist of a glue-like substance from the birds' spittle and sea-foam mixed up with bits of straw, grass, and feathers. The little sea swallows build them in the crevices of rocks, and the Javanese get the nests by swinging down rope ladders from stakes fixed at the top of the steep cliffs where they are to be found.

The nests are prepared by first washing them in three or four changes of lukewarm water to remove the feathers and the straw. What is left looks like vermicelli, and, though it has neither taste nor smell, it is highly esteemed because it is a fine digestant. These birds' nests, which bring ten dollars and upward a pound, are too costly for ordinary people, but form a part of the soups and stews of the princes and sovereigns of Java.

In return for all he gave up, the Susuhunan receives from the Dutch government a salary of three hundred and sixty thousand gold dollars a year and an assured position in the eyes of the natives. The Sultan of Djokja has a salary of two hundred thousand dollars a year. In both courts the Hollanders uphold the sovereigns in their traditional ceremonies and imperial display. Five or six times a year great official receptions are held within the palace enclosure at Solo. They take place in the hall of audience, an enormous chamber floored with shining white marble. The ceiling and the slender gold-and-white columns supporting it are incrusted with rare wood, beauti-

ful carvings, and precious materials. At night hundreds of lights flash from chandeliers of gold, bronze, and crystal. And on a wall of this stately chamber is a modern telephone! On festival days the Susuhunan sits on a canopied throne at the back of the hall, and receives ambassadors, distinguished strangers, and the Dutch Resident himself. Only natives of high rank are admitted and they kneel in a posture of adoration before the man whom they consider their political and religious ruler.

Though he leaves his palace enclosure quite often to drive through the city in his gilded coach, the Susuhunan formally shows himself to his subjects only about four times a year. I suppose he does so to assure them that the universe is still being held together. At an appointed hour on these great occasions the guns of the Dutch fort and of the Javanese army fire salutes, the military bands and the native orchestra strike up, the main gate is thrown open, and the royal procession appears. The Susuhunan, decked out in jewellery and attended by his troops in the most fantastic costumes imaginable, walks solemnly along, arm in arm with his "elder brother," the Dutch Resident. Squads of Amazons in gay *sarongs* march on each side, holding their lances as if ready to throw them at an enemy. Following His Highness are scores of other women, their arms and shoulders bare, carrying the gold and silver images of elephants, horses, peacocks, and geese, the golden spittoons and siri-boxes, the handkerchiefs and the weapons that make up the royal paraphernalia of this oriental potentate.

At length the Susuhunan and the Resident seat themselves on a kind of platform erected near the entrance to the *kraton*, but within the gates. Outside, the people

massed in the open square crouch with their faces almost in the dust. Then all the ten thousand dwellers in the palace city pass in review before their ruler, who sits on his throne like a stone Buddha. A large number of those in the procession carry huge baskets or draw carts filled with eggs, rice, sweets, and fruits. At a sign from His Majesty, these eatables are dealt out to the crowd. After the high dignitaries about him have been served with sweets and offered betel nut the Susuhunan returns in state to his palace, his three thousand wives and concubines, and the business of spending his enormous revenues.

The Sultan has accumulated vast treasures in gold and jewels. His women are gorgeous in silver and gold, and the princes and princesses wear diamonds galore. He has his own zoölogical garden and his stables contain the finest of horses.

The states of Djokja and Solo are in the richest part of Java. Both of these sultans have grown wealthy under the Dutch by leasing their lands out to foreigners, usually for twenty-year terms, on condition that the rice lands, consisting of half the rented estates, should belong to the natives. According to custom half the land shall be planted in sugar and half in rice and native food crops. These are alternated every year, so that there is a rotation of crops, which is best for both planter and native. The contractor knows that he is to get but half the land at one time and the rent is arranged accordingly. The people work the lands as villages and communities, dividing the crops. While cultivating the rice they have their own head men, but on the sugar plantations they are governed by the planter's overseer, and he uses them practically as

he pleases. Each planter has his own watchman furnished by the Sultan. In case of fault he can punish only through the Sultan, or rather the Resident. A large part of the labour is free at least one day in seven. This is due to the Sultan as a tax, and he transfers it to the planters at a fixed rate. The hours of work are from six to six, with two hours off at noon.

The planters live in much style, and when the Sultan visits them they spend large sums in his entertainment. I recently spent some time at a sugar factory, the lands about which were leased of His Highness of Solo. The factor expected to have the Sultan go over his plantation and he was anxious to make a good impression upon him. He had put up a pavilion at the railroad station as a sort of rest-house for his royal guest, and had erected triumphal arches along the line of march. I was told that His Majesty's visit would cost at least a thousand dollars, and that there would be parties, receptions, and other gay doings. While I was on the estate one of the Sultan's officials came out to look into the arrangements for the imperial entertainment. As the official stepped from the railroad car, one of his servants held a great umbrella over him to shield him from the sun. Another followed carrying his sword, another with his spear, while the fourth came along bearing his cane. The Sultan's representative was in his bare feet and there was a marked contrast between his gorgeous retinue and his own slovenly appearance.

It is a striking commentary on the excellence of the Dutch rule in Java that the natives of the two states ruled by sultans are much poorer than those of the states governed almost entirely by the Dutch. Most of the

people here at Surakarta dress in blue cotton. They are so poor they cannot wear the beautiful printed goods they make, although their manufactures are sold in the other states.

Indeed, the Solo women of the lower class are veritable beasts of burden. I see them everywhere walking along under heavy loads. They carry fruits and vegetables to market on their backs and on poles over their shoulders. They work in the fields and are the porters of the bazaars. As at Djokja, they do most of the selling in the markets. They peddle about all kinds of wares and have meat shops, dry-goods stores, basket stores, and vegetable booths. The druggists are females, and in fact most of the business seems to be done by women. Just outside the palace city there are a score or more booths where women are selling jewellery and powder and paint to those who serve in the court. They sell also costly *sarongs* and other articles. I tried to buy a few specimens as curios, but found that the women traders were entirely too shrewd for my limited purse.

The markets of Solo consist of vast sheds divided into booths and of open courts covered with huge umbrellas made of palm leaves with long handles driven into the ground. Every market woman carries her umbrella to the spot she has rented and plants it. She then spreads straw mats about it, and arranges her wares upon them, leaving space enough for herself to sit cross-legged in the midst of her goods. The umbrella shades her, and it is made so that it can be inclined to face the sun. There are hundreds of such shelters in the market place.

Stroll with me through the great court and take a look at them. We are in a field which seems to be growing

umbrellas, and under each is a black-haired, yellow-faced woman surrounded by piles of various articles. Here is one squatting down among green corn, string beans, and other vegetables. There is one selling tobacco, and the woman farther on has nothing but corn husks to be used for cigarette paper. On the opposite side of me is a girl selling tea. Her stock is piled up on a mat on the ground in front of her and she is measuring it out with a little coconut shell. I point to the shell and ask: "How much?" and she replies in Javanese: "Two cents."

What a lot of fruit peddlers there are everywhere! Here is one at my feet with a heap of pineapples before her. The pines are dead ripe. They are just fresh from the fields and the rich odour of the fruit fills the air. I pick up one of the largest and the girl tells me it is worth five Javanese cents, equal to two cents American. As she talks I make a note of her dress. She is clad like hundreds of other women in the market and is a fair type of the maidens of Solo. Her complexion is the colour of rich Jersey cream, her hair is black, long, and straight. It is greasy with oil and is combed tightly back from her forehead and tied in a knot at the back. Her ear lobes are filled with brass plugs as thick as my thumb, each plug set with red and white glass to imitate rubies and diamonds. She has on a blue cotton jacket and a *sarong*. Her jacket is open at the front so that I see the blue breast band bound tightly about the body just under the arms. As I look her mouth opens, her tongue rises, and she pushes to the front of her lips a great brown quid of betel nut and tobacco, and holds it there a moment, while down from the corners of her mouth a stream of red betel juice slowly trickles.

Only visitors to the tropics know the delight of tasting mangosteens. A British steamship company vainly offered $150 to the captain who would bring a basket of them to Queen Victoria, for this fruit will not stand shipment to the temperate zone.

Java's seas and rivers swarm with edible fish. One kind of perch leaves the water for short periods and climbs on the roots of the trees in the marshes for a full meal of insects.

The Javanese are capable of doing fine work in both metal and wood, and are usually steady workers. They lack, however, the commercial instincts of the Chinese, who have monopolized the trade in products of native craftsmanship.

Moving on, we come to a section which makes us think of some of the markets of Germany or Holland, and we look about in vain for Limburger cheese. We see, instead, enormous round prickly balls, some of which are cut open showing a custard-like pulp. This is the durian. A single fruit often weighs as much as a two-year-old baby. It has a smell like stale eggs or very old cheese, but its taste is delicious. The pulp which covers the seeds is the edible portion. It looks much like custard, and is greatly prized by the natives, and also by foreigners when they can overcome their dislike of the smell.

Another fruit sold in Java is the papaya, which is much like a muskmelon and is a great digestant. Then there is the jack fruit, a single pear of which would fill a peck measure and weighs from thirty to forty pounds. There are mangosteens, which look like rich, red apples, but which are as white as snow on the inside and taste like strawberries and ice cream. This is the fruit Queen Victoria so wanted to taste, but the importers could not get it to her in edible condition. There are great pomelos, oranges of all varieties, watermelons and muskmelons, as well as every fruit of the tropics. There is no land in the world which has better fruit than Java, and the best of all kinds comes to Solo.

CHAPTER XVII

ON THE COFFEE ESTATES

FROM the coffee island of Java I write these coffee notes for the greatest coffee lovers on earth. The Irish are famous as whiskey drinkers, the English as tea drinkers, the Germans as beer drinkers, the French as wine drinkers, but the Yankees lead the world as coffee drinkers. We consume almost half of all the coffee grown upon earth. We annually use about twelve hundred million pounds, or on the average more than ten pounds a year for every man, woman, and child amongst us. In a single year our coffee bill runs to $180,000,000.

We take the best of the Java coffee. The exporters here tell me that the cream of the product of this island and Sumatra goes to the United States, most of it at such high prices that it sells only to the rich. We purchase the bulk of the coffee exported from Brazil, and of recent years have been buying much from Central America. Our consumption is on the increase, and there is no doubt that we shall be spending millions upon millions of dollars annually for coffee during the rest of our national life.

The possibilities of coffee culture are being studied by the Agricultural Department in Washington, which has established experimental coffee plantations in the Hawaiian Islands, in Porto Rico, Samoa, and the Philippines. At present the only considerable coffee-yielding territory

under the United States flag is Porto Rico, which produces about thirty million pounds of good quality coffee a year.

In the Hawaiian Islands, where coffee growing is still in its infancy, about five hundred thousand acres are being developed, and the plantations are paying well. When I was at Honolulu I was told that coffee raising netted 40 per cent. on the investment, that the island of Hawaii had already extensive coffee estates and that more were being laid out.

In the southern part of the Philippines, on the island of Jolo, I saw a plantation of thirty-five thousand trees. I went over the property with its owner and found all the trees loaded. They were then only three years old, but they were breaking down with fruit. I have travelled through the biggest coffee districts of Brazil, Mexico, and Porto Rico, but I have never seen such luxuriant trees as those on the island of Jolo. The plantation area was cut out of the forest, and the coffee was raised with but little cultivation. Most of the Sulu Archipelago is adapted to coffee raising. Luzon was at one time noted as a coffee producer, but the trees were destroyed by blight. Of recent years the scientists have been experimenting to counteract this disease, and the probability is that the Philippine Islands will some day have a large part in filling our morning coffee cups.

The ordinary coffee plant, *coffea arabica*, is a native of Abyssinia, whence it was carried to Arabia about the beginning of the fifteenth century. Here it did so well that Mocha came to be considered its real home. From Arabia it was taken to all parts of the Mohammedan world, by the pilgrims to Mecca, who found it a good substitute

for the fermented liquor forbidden by the Koran. Its fame spread slowly to the West, and it was not until 1652 that the first coffee-house was opened in London and it was seven years later before it become fashionable in Paris.

For some time after its introduction into Europe all the coffee came from Arabia, but in 1689 the Dutch succeeded in growing coffee trees in Java from beans obtained in Malabar, India. In 1706 the first shipment of coffee from the island, only a few pounds, was sent with one small plant to the directors of the Dutch East India Company at Amsterdam. The plant, which was nursed like a tender infant all the way overseas, was cultivated and multiplied in the Botanical Gardens of the city, from which, it is said, a cutting was stolen and smuggled to the Botanical Garden at Paris. Here it grew into a vigorous tree, a slip from which was intrusted in 1720 to a French lieutenant to take to the island of Martinique. From this single slip are said to be descended all the trees of the immense plantations of the West Indies and Central and South America, with the exception of those of the Dutch West Indies, which were supplied direct from Amsterdam.

A coffee consignment of nine hundred pounds was sold at public auction by the Dutch East India Company in 1711 for forty cents a pound. This was such a good price that the company urged its representatives in the East Indies to push the industry for all the traffic would bear. The native rulers were forced to agree to deliver a certain amount annually, and the company sent around inspectors to see that the regents held their people to a fixed production. Finally, the native chiefs were ordered to see that every family should plant and look after one thousand trees. The company took

When five years old the coffee trees yield their first considerable crop of fleshy red berries, which are picked by hand or shaken from the branches. Buds, flowers, and fruit may often be seen at one time on the same bough.

The best coffee is grown in regions from two thousand to four thousand feet above sea level. The first consignment of Java coffee was auctioned in Holland in 1874 and brought forty cents a pound.

Harvesting the crop is the heaviest part of the work in growing coffee. The young trees are set out ten feet apart and shaded by larger trees or shrubs. Practically no cultivation of the soil is required.

its tribute in coffee from the regents, and arranged to buy the rest of their crop at about one cent a pound. By this system both the company and the regents got huge profits, but the mass of the people could hardly exist. Many of them had to spend so much time on coffee cultivation that their rice fields were neglected, and the result was famine and starvation.

When the Dutch government first took over the affairs of the bankrupt East India Company, it continued the policy of the forced cultivation of coffee. For many years, a favourite brand in the United States was "old government Java," which came from the plantations owned by Holland on this island. For years the government was the chief coffee grower. It had thousands of acres of coffee estates, which it managed by forcing the natives to work upon them in lieu of taxes. These estates yielded a vast revenue. From 1831 to 1875 Java turned into the Dutch treasury about $280,000,000, most of which came from coffee.

The government gave percentages to the chiefs of the various villages according to the quality of the coffee produced in their respective districts. They established rules of culture, organized nurseries to provide the best of plants for the natives, and in this way improved the Java coffee plant until it was one of the best of the world.

As time went on the natives were given better terms. The plantations were leased out to them at auction for only short periods, and later many of them were given over to the native villages at a rent equal to one third or one half the crop. Then competition came in from other countries, there were blights and diseases, and the government found its coffee business was fast becoming a liability

rather than an asset. It was then allowed to go into the hands of private companies and individuals, and there it is to-day.

Some of the best coffee estates I have seen are on the slopes of the Tengger Mountains, in northeastern Java. I reached them by taking train at Surabaya and then going on ponies about a day's ride through the hills. I rode for miles along the sides of the mountains through coffee plantations. There were millions of trees, most of them not much bigger around than fishing poles and covered with varnished green leaves. In some places the plantations were young, the bushes being shaded with banana plants and with trees. In others they were loaded with berries, which men, women, and children were picking in baskets and boys were carrying home.

There were villages scattered here and there through the coffee districts, collections of little houses of bamboo basket work. Each village had a gate leading into it and the houses were fenced with bamboo poles set crosswise. There was coffee drying in the sun in front of some of the huts, and before others I saw girls pounding the hulls off the dried beans.

In clearing a coffee estate from the jungle the large stumps are often left in the fields and logs lie as they fall. No ploughing is done, but holes are made for planting. On the slopes of the hills, terraces are made to prevent the soil being washed away by the rains, a great trouble with the upland planters. The plants are usually set ten feet apart and are well shaded. For two to three months the ground is hoed, after which no further cultivation is needed. Trees are pruned so that they will not grow any higher than six feet, which keeps them in reach of the

pickers. Young shoots are cut so that the strength will go into the main branches.

The coffee estates are interspersed with forests, and there are many monkeys, great long-tailed black fellows, which jump from branch to branch and from one tree to another. I saw them squatting at the roots of the branches and creeping around the tree trunks grinning and chattering at me as I rode by on my pony. Now I would see one clinging to a limb two hundred feet above the ground, and then catch sight of one jumping fifteen feet from one tree to another.

The vegetation here is everywhere luxuriant. There are palm trees and banana plants. There are all sorts of winding vines. The very plants seem to love one another, and the trees twist themselves about their fellows and grow up together. Even the dead branches are covered with green; they are clothed with orchids and moss. There are orchids everywhere, and such orchids! Here one has wound itself around a branch like a necklace; there one squats like a monkey at the root of a limb, and farther over are great masses of green out of which come blossoms of many hues.

Java's numerous volcanoes spout forth mud instead of stones, and this chocolate-brown mud when dry becomes a fine dust many feet thick. In the coffee districts it has a reddish tinge, and is probably impregnated with iron. The best coffee regions are from two thousand to four thousand feet above the sea, and some of the very best are in the Praenger or mountainous provinces of western Java.

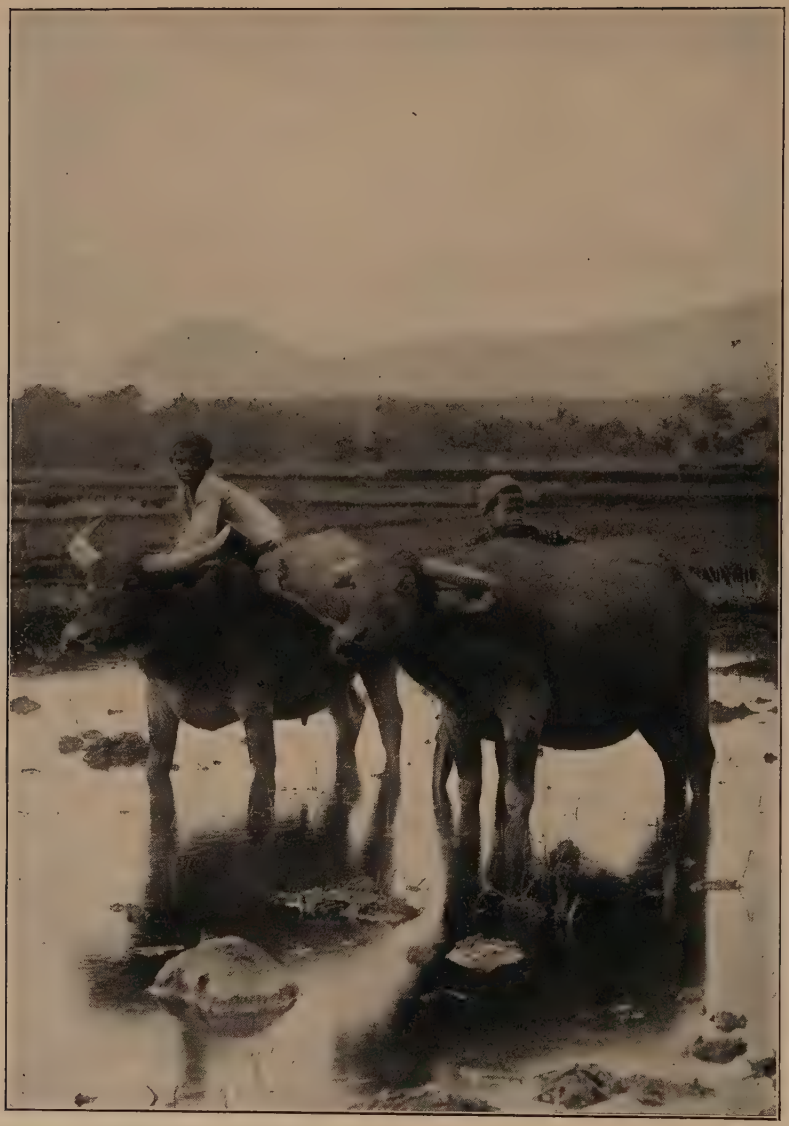
A great deal of pure Java goes to the United States, where it brings very high prices and is sometimes used to

flavour other coffee. The pure article cannot possibly be sold cheap, so when you are told you are getting a bargain in pure Java coffee, don't take it.

I visited a coffee warehouse in the town of Poespo, where I stopped on my way to the Bromo volcano. It was a building of woven bamboo walls and a roof of red tiles with a cement floor. On the wide porch in front of it were scales for weighing coffee, and within, piled up like so many oats on the floor, was a little mountain of green coffee beans. In the pile were two wooden scoop shovels for bagging the coffee, and two half-naked men were at work preparing it for shipment to market. Near the door, sitting cross-legged upon the floor before a table about a foot high, was a turbaned Javanese in spectacles. He was the native government official who bought the coffee and sent it to the seacoast.

In the warehouses here I have seen scores of Javanese girls squatting down with basket trays of coffee in front of them. They handle almost every grain, putting the small ones into one place and the larger ones into another, sorting them as carefully as though they were grains of gold. As the coffee beans come in they are of a rich olive-green colour. They are left for some time on the floor of the warehouse until they turn a light yellow. No colouring matter whatever is used, and the coffee is shipped as pure as it grows on a plantation. For a great many years the best varieties were sent to New York in sailing vessels carrying nothing else. The coffee steamed and cured during the long three months' voyage, which so much improved its flavour that sailing vessels were preferred to steamers. Coffee, like wine, improves with age, and up to a certain limit the older it is the better.

On some estates cleaning machinery is used, but the commoner method is to spread the coffee berries out in the sun until the pulp is all dried. After this the two seeds inside each fruit, the coffee "beans," are removed.



The water buffalo is indispensable to the natives for plowing their rice fields and furnishes them besides rich and wholesome milk. These animals are easily managed by the native boys, but they do not like Europeans.

ON THE COFFEE ESTATES

Some of the private estates of Java are perhaps more scientifically managed than any other coffee plantations of the world. At Sinagar, a vast plantation near Buitenzorg, everything connected with the curing of the coffee is done by machinery. I saw there one machine which cleaned twenty thousand pounds of coffee a day. It reduced the dried berry to a powder but did not injure the grain. After this the seed is further cleaned in a simple fanning mill.

Until the latter part of the last century the Arabian varieties of coffee were the only ones grown in Java. But in 1875 there was a blight which nearly put the planters out of business; so experiments were made to see whether a kind could not be found which would resist the blight. A variety from Liberia seemed to be the solution of the problem, but after a while it was found that it did not do so well as in Liberia. More experiments resulted in a cross-breeding of the Liberian and Arabian coffees with the *robusta*, and this hybrid is now the most popular. Just before the blight Java exported three million pounds of coffee a year. Nowadays the Dutch East Indies produces only about one third as much. This is due partly to the discouragement caused by the coffee pests, but more largely to the enormous quantities grown in Brazil, which have brought down prices all over the world.

The chief coffee pests here are a small beetle, which bores holes in the branches, and a leaf louse, which attacks the trees every year. The only thing that has been found to destroy the lice is the fungus growing on the trees after the rainy season, which kills them. The tree louse is the great enemy of high coffee yield in Java.

CHAPTER XVIII

VOLCANOES OF THE LAND OF FIRE

HIGH up in the Tengger Mountains, more than a mile above the level of the Indian Ocean, surrounded by mighty volcanoes, I seem almost to be in another world. I am in the town of Tosari, in the wildest section of east Java. I can hear the rumbling and grumbling from within the crater of Smeru, and by going outside can see it sending up its perpetual columns of steam into the air. I have just returned from a visit of exploration to the active volcano of Bromo, which has sprung up in the huge crater of the Tengger, one of the greatest on the globe.

Java has been called the land of fire. It has more volcanoes in proportion to its area than any other part of the world, and almost every other island of this great archipelago from the Philippines to Australia has its mountains which spout steam, fire, and volcanic mud. In crossing Java I was in sight of volcanoes all the way. There are more than fifty mountain peaks capped with craters, some sleeping, some dead, and some still breathing forth volumes of sulphur and steam. It has ten volcanoes, each of which pierces the clouds at over 12,000 feet. There are five other volcanoes which are over 9000 feet high, and ten more, each one of which is 7000 feet and upward!

At Batavia I could see the volcanoes of Salak and Gede, and in coming eastward I stopped off to investigate the

great tea and coffee plantations upon their slopes. Gede is twice as high as Mount Washington, and Salak kisses the clouds at a mile and a half above the sea. A little farther on I saw an enormous mountain which the natives call The Forge. The Javanese word for it is Papandayang. It is an active volcano which is always growling, a mighty anvil upon which Vulcan is for ever striking his hammer. There is a health resort near it, and you can drive almost to the crater, and after a short walk look down into the pools of mud and sulphur which boil and spit on its floor.

The eruption in 1772 entirely changed the shape of Papandayang. One summer night the natives for miles around were terrified to see the mountain completely enveloped by a cloud of fire. They took to flight, but before all could save themselves the mountain began to give way. With the most frightful noise and the discharge of tons of volcanic substances, the greater part of the huge cone fell into the bowels of the earth. It is estimated that an area fifteen miles long and fully six miles wide was swallowed up, taking with it forty villages, three thousand people, plantations of coffee and indigo, and hundreds of cattle.

Near Papandayang is the world-famous Telega Bodas, or White Lake, which is over five thousand feet above sea level. Enclosed in its steep banks, green with rich foliage to the water's edge, is the pale greenish-white body of water, seven hundred feet in diameter. It gets its colour from the sulphur and alum at the bottom and its surface is disturbed only by the constant bubbling of the water, caused by the gases escaping from within the earth. The lake lies in the crater of a volcano long since extinct.

Still farther eastward is Mount Galunggung, which has

had some terrible eruptions in the last hundred years or so. About the time that Monroe was President it vomited a deluge of hot water and mud, sweeping away trees, houses, beasts, and human beings. It sent up so many stones that they fell like rain and in three hours the rivers of boiling mud which came forth destroyed everything within a radius of twenty miles. Then there was a rest of four days. At the close of that time came an earthquake and the whole top of the mountain shot into the air. The mud flowed for weeks, burying one hundred and fourteen villages, killing four thousand people, and covering the whole country about with a layer of greenish blue mud which in places was fifty feet deep.

These rivers of mud are characteristic of the Java volcanoes. The soil of the whole island was largely built up by them. The mud comes forth boiling hot, but dries into a kind of ash. With the mud come stones and ashes and steam. Though eventually this mud and ash form perhaps the richest land on earth, such eruptions as those I have described make the regions they cover desolate for years.

Near Bandong I saw the volcano of Tangkuban Prahu, or "the Upturned Boat," a mountain whose top looks just like a boat turned upside down. You make your way to it through quinine plantations and in the peak find two craters, each about six hundred feet deep, both seething and boiling and spitting out mud, steam, and gas. Inside the craters are sulphuric crystals and flowers. Near Djokja I saw the Merapi, down which the lava is still running, and farther on saw a half-dozen other great peaks each sending up its column of steam.

But I have come to Tosari to describe the Tengger,

and I give you the notes as they were written right on the ground, part of them with a handkerchief over my mouth to keep out the brimstone fumes which were coming up from the hell pit below. The Tengger volcano is older than the records of history. Its crater is so large that other volcanoes have burst forth in it, and one crater, the Bromo, is still active. The floor of the Tengger itself is covered with a sea of sand. This "Zand Zee," as the Dutch call it, is one of the wonders of the world.

The town of Tosari is the starting point for a visit to the volcano. It is situated in the Tengger Mountains higher above the sea than is Mount Washington, in a region covered with luxuriant vegetation. The town is one of thatched huts, with a Dutch sanitarium on the hill above it. It is the great health resort of Java. The native inhabitants are Javanese mountaineers, some of them Nature worshippers who live on the edge of the volcano and make sacrifices to it. I am staying at the sanitarium and it was from here that I started yesterday morning with my guide for the Bromo. We had two ratty Javanese ponies and three mountain coolies to take care of the horses and carry our lunch.

We left Tosari in the ghostly light of the early morning, when the world below us was hidden in the clouds. We seemed to be travelling over a sea of clouds and there were others above us nestling here and there in the mountains. As the sun broke forth it painted these masses of vapour with different tints and shades of gold, and as it rose higher, the mountains to the eastward were clear cut against the walls of molten gold, the rich dark blue of their sides backed by the gorgeous yellow. A moment later a black sheet of clouds veiled the face of the sun, which shot

its rays through a place in the centre where the sheet was thinnest. In a few moments it bored through and made a funnel-like road of blue through the golden wall of the sky. It seemed a veritable road to Heaven itself. Through clouds like these our ponies dragged us up the steep hills. We wound this way and that, now crawling up steps of corduroy and now hanging over the edges of ravines down which we could look for a thousand feet into beds of snowy or lavender clouds, while above us were the mountains piercing the blue.

The scenes of the earth were quite as wonderful as those of the heavens. Some of the canyons are a thousand feet deep and so steep that one would think the crops would fall out of the ground. Still these canyons are cultivated clear to the roadway and high above it. The crops are Indian corn, cabbages, and potatoes. The mountains are cut up with drains and the cabbage and potato patches are hoed. One could not possibly plough them without tying his pony to a tree to keep him from falling down the mountain. The cabbages and potatoes are carried down to the lowlands to market. The cabbages grow on trees, as it were. Each has a stem two, three, or four feet long, and my guide told me that when the head is cut from a stem another cabbage will grow upon it. I don't think he lied.

I missed the rice fields of other parts of Java. Their absence is not due to the lack of water for irrigation but to an old-time tradition of these Tenggris, as the natives here are called. Cultivation of rice has been prohibited by their religious custom since the days when the Mohammedans overran the lowlands and drove them up to these mountain sides.

There are about five thousand of the Tenggris, who are never seen beyond their own upland regions. They are browner, shorter, and stronger than the Javanese of the plains. They are also honest, industrious, dirty, and unusually moral. They marry only among themselves and are firmly wedded to their ancient faith, a mixture of Brahmanism and Nature worship. All their huts, little wooden structures with thatched roofs, are built without windows and with the doors facing toward Bromo. Every year the people climb up the slopes of the volcano with offerings of meats and fruits in place of the human sacrifices which, it is said, they used to make.

Indeed, I have been told that, notwithstanding his Mohammedanism and his European education, even the Sultan of Solo sends offerings to the volcano of Merapi every year. A procession of servants goes to the slopes of the volcano, which is not far from Surakarta, leaving there food and even clothing. In times past Merapi has shaken the throne of the Sultan's predecessors with its eruptions, so I suppose he takes no chances of offending its patron god. And it was not so long ago that the other native sultan, His Highness of Djokja, used to send down to the southern shores of the island gifts to the goddess of that coast. The natives there still place close to the water their little piles of fruit and rice. When the tide comes up and takes them away, the Javanese say the goddess has claimed her own and is pleased.

CHAPTER XIX

THE SAND SEA AND THE BROMO

THE vegetation grew scantier as we climbed on up the mountains. At the start we rode a long distance through fern trees. The road itself is walled with ferns, and these and the orchids hanging in the trees make the country more wonderful than the Hanging Gardens of Semiramis at Babylon.

About an hour before coming to the Sand Sea, I got a fine view of the highest volcano of Java. This is the Smeru, whose crater reaches almost two miles and a half above the level of the Indian Ocean. On rounding a bend in the mountain path I saw the volcano. It lay behind green hills, a great navy-blue cone painted upon the lighter wall of the clouds. At its feet there were other mountains, also blue in the distance, and out of its top as I looked the steam spiralled upward in thin wreaths. I stopped my pony and watched. The column of steam thickened and darkened, the volume increasing till at last a black cloud mass, looking like two human heads back to back, shot forth and rested against the blue—a two-headed Janus, a guardian of the gates of Heaven, born of Smeru. As the smoke rose it grew thicker, until at last it formed a great pall, rising high above the crater. In a few moments it separated from the mountain and Smeru itself looked dead. It seemed to me a little eruption staged for my especial benefit and I thanked Vulcan for it.

Mount Smeru, with its top almost two miles and a half above the sea, is the giant of all the volcanoes of Java. Above it rise perpetual clouds of steam and smoke as from a sacrificial fire on the altar of Vulcan.

"I climbed over the lava and made my way up a great ladder to the little peak of the crater. My breath grew shorter and shorter and I coughed repeatedly, for sulphur fumes filled the air."

The Tenggri live in the mountain town of Tosari, Java's chief health resort. They used to make human sacrifices to Bromo every year, but now, instead, they offer rice and fruits to the god of the volcano.

As I still looked, another gust of steam came out and took the shape of Punch, a big-headed, fat-bellied man of the clouds rising into the heavens and there losing his shape.

Passing on, I had to descend about a half mile through fern forests loaded with orchids and then climb another mountain, going up, up, up until I pierced the very clouds. The country was wilder, the vegetation scantier, and the earth all rock and volcanic ash.

My pony slid backward as he climbed, but at last we came to a break in the top of the wall of the mountains, a little crack on what seemed to me to be the edge of the roof of the world. I rode my pony into the crack and looked down hundreds of feet to a great valley stretching away for miles, its level floor spread with thousands of acres of gray-black sand. From the middle of this vast sea of sand there rose abruptly the chopped-off cone of the volcano of Batok. Behind, and a bit to the left of Batok, was the gray smoking crater of Bromo, with its steep, furrowed walls. Back of this, ridge after ridge of other crater rims faded off to a purplish gray in the distance. Towering above all the others was the perfect pyramid of Smeru, the giant of them all.

As I looked I saw two of the natives kneel down in worship of the mountains. They had scooped out little niches in the walls of the Moneggal Pass in which I was standing and in them had placed their offerings of coffee and corn. They were praying, and with the convulsions of nature about them and the wonderful grandeur of all the surroundings, their worship did not seem strange.

The way down to the Sand Sea is almost perpendicular. It is, I judge, at least a thousand feet, and there is a winding path with railings here and there extending to the

foot. This path is cut out of the side of the crater, and as I slipped and slid and crawled down, leading my pony, I could see the different layers of volcanic sand marking the several deposits. Some were as fine as the finest sea sand, some strata were of pebbles the size of a lima bean, and above all lay a mass of cold lava of a rich copper colour. The pebbles were ashy gray, dark brown, and sulphur-yellow.

I could not appreciate the size of the crater until I got to the bottom and began to cross the sea of sand, which is, perhaps, the greatest amphitheatre on earth. The walls are precipitous. They are covered with vegetation, and they seemed to be canopied with the clouds. The men at the top of the path looked like pygmies as I looked up at them from the floor of the crater and as I rode on and on over the Sand Sea they grew smaller until they were almost lost to view.

I skirted the Batok volcano. The sides of its symmetrical cone looked as if they had been ploughed by the god of fire. They lay in perfect ridges, mighty gutters down which the molten lava flowed at the time of its eruption long ago. Now the troughs have been deepened year by year with the floods of the tropics.

Looking up at its chopped-off top, I was reminded of the legend of how Batok happened to rise thus abruptly out of the middle of the level floor of sand. Once upon a time in the days of the far-gone-by, so the story goes, there lived on the slopes of Bromo a stern giant with a beautiful daughter. Another powerful giant of the region fell desperately in love with the maiden, but the father was not sure that his affection was of the lasting kind. So, to test his daughter's suitor, he proposed that the

latter should in a single night dig out all the ugly sea of sand surrounding her home. The lover set to work with a will, shovelling out enormous quantities of sand with a scoop made of half of a giant coconut shell. But still there were vast stretches of sand left. At last toward morning, the disappointed lover saw he was beaten, threw down his shovel with a curse, and departed, never to return. It is his great scoop, over-grown with grass, which now forms the crater of Batok.

Riding around Batok a distance of several miles, I suddenly came in sight of the Bromo, still spitting forth fire and steam and stones. The mountain is of bare gray lava. Its foot and sides are corrugated with lava streams and the wrinkles of the neck are filled with volcanic sand. The crater is like an irregular basin and the whole resembles a vast bowl.

It was far too steep for my pony, so I left him with the guide and, staff in hand, climbed over the lava up to a great ladder built from the peak of the crater hundreds of feet down the mountain. I found my breath growing shorter and shorter as I made my way up the volcano. There were fumes of sulphur in the air and I coughed repeatedly.

Resting from time to time, I at last reached the very edge of the crater, and stood there upon volcanic ash looking down into a mighty cauldron, which bubbled and boiled and sent up geysers of steam and flame. All about and below me was the hardened lava once molten, but now black and rusty and cold. I walked carefully for perhaps a mile along the edge of the crater, trying to get to the windward of the sulphur fumes and looking down as I did so into the great brown funnel in which the steaming

yellow sulphur was sending up blue flames. I took a stone and rolled it down. I could see it jumping from level to level until at last it made a splash in the lake of sulphur at the bottom.

I despair of giving an adequate conception of these awful wonders. Standing there on the edge of the Bromo crater, I seemed to be amid the ruins of the world. I had left my guide at the bottom of the mountain and I was all alone on this mighty volcano on the Sand Sea, looking down upon the boiling, flaming mass which bubbled and spat in that huge funnel fifteen hundred feet below me. The silence was death-like. I could almost feel the lakes of fire seething beneath and wondered if the day of total destruction might not be at hand.

I picked my way around the narrow rim of the crater through walls of lava ash so precipitous that, had I missed my footing, I should have rolled down into that pit beneath me. As I stood there the wind came up. It roared as it was caught in the funnel of the crater and whirled about its sides. At the same time the steam increased. It burst forth with a sound like the blowing off of a thousand engines at once. It soon filled the crater and broke out in great gusts, enveloping the mountain top where I stood, and rolling on up into the clouds.

A few moments later it had passed away and I could again see the vast crater filled with sand and the titanic marvels about me on every side. I could imagine the day when the amphitheatre was one mass of lava, when the air for miles about was filled with fire, steam, stones, and volcanic ash, when over those towering walls were flowing perhaps the most terrible rivers of lava and mud the world has ever known. I could see the now-dead cone of the

A native tradition says the lover of a beautiful maiden living on the slopes of Bromo tried to dig away all the ugly sea sand before her door. But he failed, and so it lies there to this day.

Carp and gurami, the king of the fresh water fish of the East Indies, are often raised for the tables of the Dutch and wealthy Chinese in big ponds lying between the volcanic hills of the interior.

A walk along the path through the crater of Papandayang, with its pools of boiling mud, and the hissing and roaring of escaping steam, will convince any one that it deserves its name "The Forge."

The bazaars swarm with coconut sellers who have brought in their wares on poles. They will sell the meat of a whole nut for a song and a cup of the fresh milk goes for less than a cent.

Batok opposite me ridged with streams of flame and the other volcanoes near by spouting out their terrible fires. As I thought thus I felt something upon my hand. I looked down—a bug as big as the head of a pin was crawling over it, and below I could see a white butterfly sitting upon a lump of sulphur on the very edge of the crater. The contrast was impressive. Here beside God's greatest work was His smallest, and as I looked I reverently raised my hat.

CHAPTER XX

SURABAYA, THE SUGAR CENTRE

SURABAYA is the New York of Netherlands India. It is not only the principal seaport of Java, but the distributing point for the eastern islands of the Dutch East Indies as well. It is only twenty-four hours by rail from Batavia and twenty hours by boat from Banjermassin, the chief port of south and east Borneo; about the same distance from the main harbours of Bali and Lombok, and but thirty-six hours from Macassar, the leading port of Celebes. The city has 160,000 inhabitants, of whom only 20,000 are Europeans. Still, these foreigners live far better than their brothers at home. Many of them are rich and their houses are palaces.

The streets of Surabaya are wide and shaded with magnificent trees. They are paved with asphalt and beautifully lighted. In the residential parts every house has a big lawn, with palm trees and flowers and walks. The grounds about the better homes are as spacious as those of the wealthiest American suburb and equally well kept. Some of the houses are enormous. They are of one story, but the rooms are large and the ceilings very high. Most of them have verandas roofed with red tiles, upheld by white marble pillars. Many of the houses and most of the porches are floored with marble. The town has electric lights. Every well-to-do man has a telephone and all the modern conveniences in his home.

SURABAYA, THE SUGAR CENTRE

This is a most cosmopolitan city. Besides the section where the Europeans live, there is a Chinese settlement equal in size to a small city and an Arab quarter containing more than 2000 people. Of the "native" population there are representatives of perhaps every race and breed in the whole archipelago. There are separate *kampongs* of Malays, Sudanese, Madurese, and Javanese. In some places, too, the various trades have segregated themselves, as in the *kampongs* of the saddlers, or the blacksmiths. The European and the Chinese sections are divided by the Kali Mas, or "River of Gold," so named from its yellow waters. They are connected by the Red Bridge, over which, it is said, more vehicles pass in a day than over London Bridge itself. I doubt the truth of the statement. The quarter given over to the Chinese shows by its cleanliness and the handsomeness of some of the houses that many of its inhabitants have grown rich.

The island of Madura, which gives Surabaya a sheltered harbour and good anchorage, also shuts off the cooling and healthful sea breezes. The city is one of the hottest in Java. Furthermore, the mosquitoes which arrive in hordes every afternoon are a great plague. Drinking water is scarce and the only water used by Europeans is that which comes daily in big iron tanks from Pasuruan, the starting place of my trip to Tosari and the Bromo volcano.

But despite the torrid heat, Surabaya, in striking contrast with Batavia, the other big city of Java, is all business, bustle, and go. The authorities apparently have never heard of traffic regulations, and I have to watch my step all the time. It seems strange to have to get out of the way of automobiles in Java, but I was nearly run

down by one the other night. The driver was a young Dutchman who was out with his sweetheart taking the air. The hand which should have been on the wheel was about the waist of his inamorata, and he was oblivious to globe trotters and everyone else.

All kinds of carriages are used here. I see English victorias and landaus. The rich Dutchmen drive about in fine style, and many of the native chiefs and nobles have magnificent turnouts. The ordinary vehicle is the *sado*, a sort of little dogcart drawn by a pony, in which the driver sits in front and the passengers behind, facing the rear. Such are the cabs generally used by the natives and half-castes in Batavia, Surabaya, and the other cities. Residents and travellers of position patronize the motor cars, or the "mylords," as the victorias are called. No one thinks of walking in this hot climate, and in the cooler parts of the day the roads are full of automobiles and carriages, private and public. There are native coachmen and footmen in livery, and according to law, each coachman has to have a whistle to warn others to keep out of his way. He carries this in his mouth and toots once or twice at every block.

I have seen many American bicycles since I have been in Java, while our automobiles outnumber ten to one the cars made in Europe. These colonial Dutchmen want the best of everything and are accustomed to paying high prices for imported luxuries.

Our cotton factories should send agents to Java to study the goods and patterns needed by the people. Java imports almost three million dollars' worth of stuff every year, and a large amount of this is cotton. England sells millions of dollars' worth of piece goods to Java annually, and Ger-

The canal boats and store houses along the waterfront of Surabaya are as Dutch as any to be seen in Holland. This city is not sleepy like old Batavia, but all business, hustle, and go.

Java is second only to Cuba in her exports of sugar, most of it going to Great Britain and her Far Eastern possessions. The industry is operated with modern efficiency and much American equipment is used in the mills.

many and Holland have long had a big share of the trade. It used to be that the Dutch monopolized everything, but at present the government does not discriminate between Dutch and other foreign imports and the tariff is low. The total foreign trade of Java alone amounts to hundreds of millions of dollars a year, and the buying power of the people is increasing right along. Formerly the United States bought little from the Dutch East Indies and sold less to them, but in recent years our share of their trade, both exports and imports, has greatly increased.

There are good markets in Java for our carpenters' tools, sewing machines, mill machinery, automobiles, typewriters, and moving-picture films. It seems strange to go into the offices of one of the big sugar mills and see the native and half-caste clerks clicking away at our American typewriters, adding machines, and other office appliances. Or, if an American goes into one of the moving-picture theatres now found in all the largest towns, he will see the film favourites of Los Angeles and New York acting on the screen. The slap-stick comedies and "Wild West" plays seem to be the ones best liked by these people here on the other side of the world from the United States.

Our commercial travellers will have but little trouble in entering Java. The custom officers are lenient. A salesman who brought some samples of silver-plated ware to Batavia not long ago was allowed to open his stuff in the custom house and sell there. He was charged duty only on the articles sold, and he used the government office as a store. There is a good opening here for American watches and clocks and all kinds of American knick-knacks and notions. The distance is too great for flour and perishable products, and the freights are high.

As a sugar exporter Java is outranked only by Cuba. At Surabaya I am at the principal sugar city of the eastern hemisphere. Here are the headquarters of the big association of factories called the Sugar Syndicate, which has done so much to improve the quality and increase the quantity of Javanese sugar. The island is now producing about three billion pounds a year, and its plantations are among the richest in the world. Most of the cane is grown in the central and eastern parts.

Whether sugar cane was native to Java or whether, as many claim, it was imported from China, it was being grown here seven centuries ago. Its cultivation did not, however, have any great commercial importance until a little more than one hundred years ago, when the island was ruled by General Van den Bosch, the man who had so much to do with introducing the famous "culture system." Besides forcing the natives to work in the cane fields, he compelled private persons to take the raw cane, on terms fixed by the government, and manufacture it into sugar.

The colonial treasury advanced money to build sugar mills, agreeing that the natives of the districts where the factories were built should be forced to grow enough cane to keep the mills going. One fifth of the land was planted in sugar and every native had to give one day a week to working the crops. The mill owner had to agree to sell one third of his product to the government at a low fixed rate, thus paying back the money advanced to him, but leaving little or nothing for his own pocket. Holland made an enormous profit out of this business, receiving for years a revenue of more than $5,000,000 annually from its sugar sales. It insisted that all plans for factories

should be submitted to the government engineers for approval, and the result is that sugar making is carried on as scientifically here as at any place in the world.

Under this system the government got so much the better of the bargain that finally it was unable to find men willing to undertake the sugar manufacturing and turn most of the proceeds into its coffers, and the business fell off. Toward the end of the last century it gave up its monopoly in sugar. After government control was removed, European capitalists began to employ native labourers, paying them wages for their work, and the number of cane plantations increased. Now the whole industry is thoroughly organized and the cultivation is along the most modern and scientific lines.

Besides the industry as conducted by Europeans, the natives also have their own way of making sugar. They cultivate the white cane, which gives a poor yield, but requires little attention. They also make little cakes of brown sugar from the sap of the toddy palm. This has a nutty flavour and sells very cheap in all the little roadside restaurants common in Java. From the fermented sap of the same tree they make the liquor they call *tuwak*. The Madurese are especially fond of *tuwak* and drink it to excess.

The organization of the European industry is amazing. At Samarang is an experiment station, where a corps of chemists and agricultural experts are always engaged on the problems of the sugar planters. Each big mill has its own general manager who receives reports every day from the heads of departments as to the quality of sugar obtained. The general managers forward these reports to the experiment station. If returns from any

mill are not up to the highest standard the station telegraphs an "advice" to the general manager, who then confers with his executives to find out the difficulty. If it is not discovered, an expert is sent at once from the station to give the necessary assistance.

Like tobacco, sugar is raised on level valley land easily irrigated and free from changing temperatures. This means that it must be grown on the lands best suited to rice. As too great an extension of sugar growing would therefore threaten the chief food supply of the natives, the government has restricted the leasing of lands to sugar companies. It allows the use of any given tract for sugar production for only one year out of three and requires that rice be planted in that area for the other two years. This means that of the one million acres devoted to the industry, only one third is annually planted to cane. From that acreage Java supplies her own needs and furnishes more than two billion pounds to the rest of the world. Her principal customers are Japan, British India, Great Britain, and Hongkong. Since the development of the Cuban and Hawaiian sugar plantations the United States has not been a big Javan sugar buyer.

Another crop which does well in Java and one that should do well in the Philippines is indigo. The best is grown in the central part of the island and I saw a number of the plantations on my way from Solo to Surabaya. Some of the planters rent their lands of the natives and others have estates leased from the Dutch government. The indigo farms look for all the world like plantations of rag-weed grown in regular rows. The indigo comes from the leaves, which are picked off three times a year and put in vats of water to ferment. Enough water is put in to just cover

the leaves. Within a short time the blue colouring matter, or juice, goes out into the water, which after a while turns a yellowish green. It is now drawn off and allowed to soak into powdered chalk, which when dried becomes the indigo of commerce. The best indigo has a fine purple-blue colour and should have a sort of copper gloss.

On my way across the island I passed through Java's oil fields. The centre of the Javanese oil industry is at Tjepu, a small town halfway between Samarang and Surabaya. Here the crude petroleum is refined at a great modern factory, and by-products, such as paraffine, wax candles, benzine, and gasoline are manufactured. Besides the oil fields of Java, large petroleum deposits have been found on the islands of Sumatra, Borneo, and Ceram. The Dutch capitalists have become much interested in the development of these resources and the oil of Netherlands India is gradually capturing the markets of India, Indo-China, China, and Japan.

The organization handling the business is "The Royal Dutch Company for Exploiting Petroleum Wells in the Netherlands Indies," to give it the full translation of its Dutch title. It was founded in 1890 with a capital of something over half a million dollars. Since then the value of its total stock has increased four hundred fold, and it has paid enormous dividends. In 1907 "The Royal Dutch" was merged with the Shell Trading and Transport Company and it has now become the chief rival of our Standard Oil Company. It is one of the great powers of the South Seas, and indeed of the whole world. Its allied and subsidiary companies have spread over the earth until they are to be found in Roumania, in Egypt, in Oklahoma, California, and others of our own

western states, and in Mexico. The Royal Dutch Shell's fleet of tank steamers goes to all parts of the globe. It is managed by the Anglo-Saxon Petroleum Company, Ltd., of London.

On several occasions the Royal Dutch groups have had to meet the fiercest kind of competition from the Standard Oil Company and other big rivals, but they have remained supreme in their field. Both the Dutch and the American companies have had the backing of their governments in their struggle for oil. The total production of crude oil from Netherlands India in a typical year is about two million tons. The oil of Java is lighter than that of Borneo. A large percentage of paraffine is found in Javanese and Borneo oil, while that from Sumatra is richer in benzine.

In the Javanese home market the oil is bought by the Chinese middlemen, who sell it to the native merchants to be peddled out in small quantities. In the bazaars the average measure is a tin cup about the size of a claret glass, and the usual purchase would not more than fill an egg shell. The oil is sold on a very small margin. The Chinese use it in their trading with the natives, exchanging it for rice and other products.

CHAPTER XXI

COLONIAL LIFE IN THE DUTCH EAST INDIES

IN THIS, the last chapter I shall write on the island of Java, I want to tell you of some of the interesting things I have noticed in going about and give you the result of some inquiries I have been making.

To begin with, what are the chances for Americans out here? Is there an opportunity for our people in this hive of busy bees, who are turning out honey that drips golden dollars and making this land the richest spot in all the eastern oceans? I have been making some investigations along this line and have discussed the question with many of the best-informed people here.

It does not seem to me that this is the place for the American who wants to strike out for himself in new lands. He can do better either at home or in one of Uncle Sam's possessions where men and money from the United States are more in demand. In the first place, nine out of ten of the white men in Java are Dutch, and the best of nearly everything naturally goes to them. The rich little country of Holland did not need to borrow of other nations colonists, experts, or capital in developing this tropical paradise they stumbled upon over two centuries in the past, and they don't need any help in making it go. Of the one hundred thousand or more Europeans here there are hardly two hundred Englishmen, less than that many Frenchmen, some three hundred Belgians, and

close to a thousand Germans. Most of the Americans I have met here are tourists and travellers. The Dutch own the island, and almost everything on it, not merely in name but in actual fact.

It has been said of Netherlands India that it is a "colony of officials." It is true that there seem to be enough government people to form a small army, but the number is not so large when one considers that they must rule and keep in order a population one third as great as that of the United States. There are only nine thousand Europeans in official positions and the rest are traders, plantation owners, factory managers, and the like. Those who are here seem to like it, and when I see how comfortably they live I am not surprised that they want to stay on. However, the conditions here are different from ours at home, and I am not sure that many Americans would like Java except for a short stay.

I have been in the homes of private individuals and those of officials in all parts of the island. Their houses are usually big, one-story buildings occupying a great deal of ground and set in the midst of the plants and flowers and trees of the tropics. There are no cellars in Java, but nearly every house has floors of cement or marble, raised several feet above the earth. This is to guard against the little animals and insects which get into the houses in spite of every precaution. Meals are served in a large room in the centre, while the bedrooms all open on a paved gallery and are arranged much like the one I described at my hotel in Batavia. In front of this inner gallery is a large outer veranda that is roofed but open on both sides to catch any breeze that may blow. This is used as a reception room, and often another one parallel to it serves

Every now and then Europeans in the lower and hotter parts of the island must come up to the inland resorts, like Garut. The town is surrounded by five volcanoes and is the starting point for motor rides and hunting trips.

Instead of feathers the cooler down of the kapok, or cotton tree, stuffs the pillows and mattresses of Java. In Holland, Australia, and New Zealand little else is used nowadays and it is also being tried with success in America.

as the living room. The verandas are furnished for comfort and coolness. The ceilings are high, and sometimes covered with bamboo matting like the walls of the native huts, and sometimes with teakwood, but never with plaster. The floor coverings are of grass rugs or matting. There are rocking chairs, but upholstered furniture is not used. This is not only because velvets and damask and tapestries are hot, but because stuffed chairs and couches would be promptly invaded by insects.

The kitchens, stables, and bathrooms are in outbuildings. The bathroom usually has whitewashed walls and floors of concrete. In one corner is a large tank filled with water with a big dipper beside it. When one wants to bathe, as he does several times a day in this tropical heat, he is supposed to pour over himself dipperfuls of cold water from the tank. And this sort of shower is really refreshing. So much so indeed that one even gets used to being watched by the lizards that cling to the ceiling, and occasionally snap at the ants and mosquitoes which come their way.

The bedrooms of Java have no curtains or other draperies. The beds are usually of iron on account of the white ants that eat anything wooden and the mattresses are of kapok, a silky down that grows around the seed of the false cotton tree. Kapok is one of Java's growing exports, and, though it is little known in America, it is fast taking the place of feathers for pillows and mattresses in Holland and other European countries. The beds are hard—a desirable thing in the tropics—and every bed has its extra bolster or "Dutch wife." The stuffed madame is round, and she never objects to cold feet. She is about five feet in length, about thirty-two inches in

circumference, and so packed with kapok that she is perfectly hard. In the hot nights she forms an excellent support for one arm and one leg, thus aiding ventilation.

At the little hotels in the interior which have neither gas nor electricity, every guest has a night lamp, a tumbler half full of water with an inch of coconut oil on top. In the oil is a sort of tin whistle with a wick running through it. The whistle floats and the wick burns all night without a smell, giving a light equal to that of a flickering candle. I usually insisted upon having a lamp in my room, but when I got it I had to pay extra.

While there are good hotels in the larger cities, I would not have been quite so comfortable on my trips into the interior if it had not been for the government rest-houses and the hospitality of the Dutch planters. The rest-houses were originally built for the use of officials on their tours of inspection, but they are also open to private individuals on application to the controller in charge. My arrangements were such that I had no difficulty in getting in. There is usually a native keeper on hand and in every one there are cards giving the charges for meals, lodging, bedding, towels, and whatever other services are supplied.

The hospitality of the Dutch colonial is like that of our proverbial South. A family may entertain nine or ten guests at a time, and that for weeks together. The house of the Resident in an out-of-the-way section frequently harbours even more visitors, for he feels that he must do the honours for his whole district.

Hospitality in Java is not the strain it often is in the States where the servant problem is acute. Here household help of all kinds is cheap, plentiful, and obliging. Even people of moderate circumstances have as many as

seven servants, each with his own special duties. The natives make wonderful nurses, or *babus* as they are called, and the *babus* love children. They are faithful and much attached to their employers so long as they are kindly treated. But they are easily wounded by harsh words and are likely to revenge themselves upon such whites as have treated them roughly. While a Dutchman never looks on the natives as his equals, he is usually considerate of their feelings, and handles them gently like so many children.

A Dutch woman may not marry a Javanese, but this rule does not apply to the men, and the children of mixed marriages are supposed to have the same standing as their fathers. They are registered and educated by the government as full-blooded Dutchmen. But, as a matter of fact, I find that they are rather looked down upon by the pure-bred Europeans, and I am told that when the colonial turns up in Holland, the members of the exclusive circles of Dutch society are keen to find out whether there is any mixed blood in his veins. If so, he is pretty liable to be snubbed.

The Dutch of this part of the world are of fine education. The men are usually college bred, and it is rare to find one who cannot speak three languages. The Dutch officials in most cases speak half a dozen, and the higher classes of the natives two or more. There is no place where one so much needs to know the customs of refined society, and no place where matters of etiquette are more rigidly observed. It is impossible to travel comfortably and see anything of the people without dress suits and dinner gowns. This is so, however, in every settlement of the Far East from Yokohoma to Hongkong and from Singa-

pore to Australia. In the most out-of-the-way parts of the least-known islands one is likely to find a planter who dresses for dinner every evening and whose wife will rather resent one's coming to the table unless he is similarly attired.

Notwithstanding this, the same woman would think nothing of my travelling around through the house in the early morning clad only in my pajamas or sitting on the veranda in my bare feet and a *sarong*. In fact, she would do the same thing herself. Here in Java many of the women come not only to early breakfast but to the noon lunches in a state of dishabille that would insure their summary dismissal from any of our seaside hotels. One stately dame who sat next me at dinner last night I met again this morning. As she appeared in the evening she made me think of a dowager queen. She was clad in a soft gray silk which looked as though it had come from Paris. Her hair was carefully dressed and her form, though a bit over-plump, was not unhandsome. She wore diamonds in her ears, at her neck, and in her hair. She was vivacious, and her conversation was charming. Indeed, I came early to breakfast hoping that I might see her again. I did see her—and such a sight! If I had had a fan I really would have hidden my face behind it to conceal my blushes. The stately figure had disappeared and in its place were the flabby outlines of a fat old woman hunched up on a chair. I could see the gross layers of adipose tissue plainly through her thin cambric jacket, which was half open at the neck. Below the jacket was draped a gorgeous *sarong* of red and black calico. It fell within six inches of her bare ankles, which, as she sat there over her coffee and hard-boiled eggs, her bare feet

On one of the prettiest roads in Surabaya is the mansion of the Dutch Resident. He deserves a handsome home, for he administers one of the richest and most densely populated districts in all Java.

The cow, brought into Java two thousand years ago from Madagascar, has degenerated from type because of the scarcity of good pasturage. The natives use cows as draught animals, not as milk producers.

A day of harvest is often begun with music made with the *angklung*, the oldest musical instrument known in Java, and said by the natives to have originated in the sound of wind blowing through a bamboo water-tube.

resting on the toes of her heelless slippers, were plainly visible.

This costume that looks so pretty on the slender and graceful native women shows to very poor advantage on the ample forms of the Dutch ladies. They used to wear it, I am told, even on the streets, when visiting informally, or out shopping. To-day, however, it is worn only in the house, and many young girls and newcomers refuse to adopt it despite its coolness and comfort.

When he first lands in the Dutch East Indies, the traveller is inclined to think the government is not especially hospitable. Every visitor, even if he is a Hollander, must within three days of his arrival present himself to the authorities, establish his identity by means of his passport, and declare whence he comes, where he is going, and what is his business. Indeed, the people here have the reputation of being rather inquisitive. In the towns and cities, the foreign colony is usually small and every one knows all about his neighbour. Batavia, for example, is a large city, but as far as its European population is concerned it is little more than a village and the people are quite provincial in asking questions. An American connected with one of our corporations that operates all over the world gave me some of his experiences. Said he:

"When I first came to Batavia I was asked by a Dutchman how much salary I got. I told him bluntly that I thought that was none of his blanked business, whereupon he replied: 'Well, if you won't answer me, I will ask the head of the house.' I afterward heard that he did so and I am sure he eventually found out my resources and income."

There is little possibility of any one's keeping such

matters a secret. The government collects an income tax on all salaries which even the officials have to pay. The declarations of income are filed in the recorder's office, and the clerks allow the information to leak.

I am surprised to find daily newspapers away out here south of the Equator. Some of the best papers in the Far East are those published in Java. They are printed in Dutch and every town of any size has one or more. Other journals are printed in the Malay and the Javanese languages. The dailies receive much of their news through a press bureau at Weltevreden, with branch offices at Batavia, Surabaya, and The Hague. One of the most important, perhaps, is the Dutch official organ, which is issued from the government printing office, where all the official books and papers are published. This establishment issues the school books in the different languages and dialects of Netherlands India. It prints notices in Chinese, Javanese, and Arabic, as all proclamations have to be made in four or five different languages. The Malay press is now almost entirely in the hands of the Chinese.

Many of the natives are already educated. Native schools are to be found everywhere and the number of students steadily increases. The leading native officials speak Dutch and the Javanese language as well. There are natives in private business who have had good educations. There are some doctors who have taken a medical-college course and been awarded diplomas. They are licensed to practice and do a good deal of work among their people. Native doctors are employed in all the hospitals and many hold positions in the government medical service.

The Dutch have established many schools which will eventually make great changes in the millions of people under their government. I travelled from Batavia to Djokjakarta with one of the school examiners, a man who has been teaching here for twenty-five years, and who is now employed in the high school at Batavia. He tells me that the government has its department of education with a minister in the cabinet of the Governor General, and that the authorities are doing all they can to advance the Javanese. They are always training new teachers and they believe that in time the whole population will read and write.

There are now high schools in the larger cities and colleges for the training of native schoolmasters and more than five thousand schools of a lower order. Some of these are private schools taught by missionaries, and there are also trade and industrial schools.

The Dutch pay their teachers well, especially those of higher rank. The school examiner I have referred to told me that his salary was three hundred dollars a month in gold. He said that primary teachers received from fifty to two hundred and twenty dollars per month, with house rent, and high-school teachers from one hundred and eighty to three hundred dollars per month, while school directors or superintendents get from two hundred and forty to four hundred dollars per month. In addition to this the teachers have a year's vacation on half pay at the close of every ten years' service and a free trip to Europe and back. After serving twenty years every teacher has the right to retire on a pension amounting to twenty-five per cent. of his salary at the time of leaving.

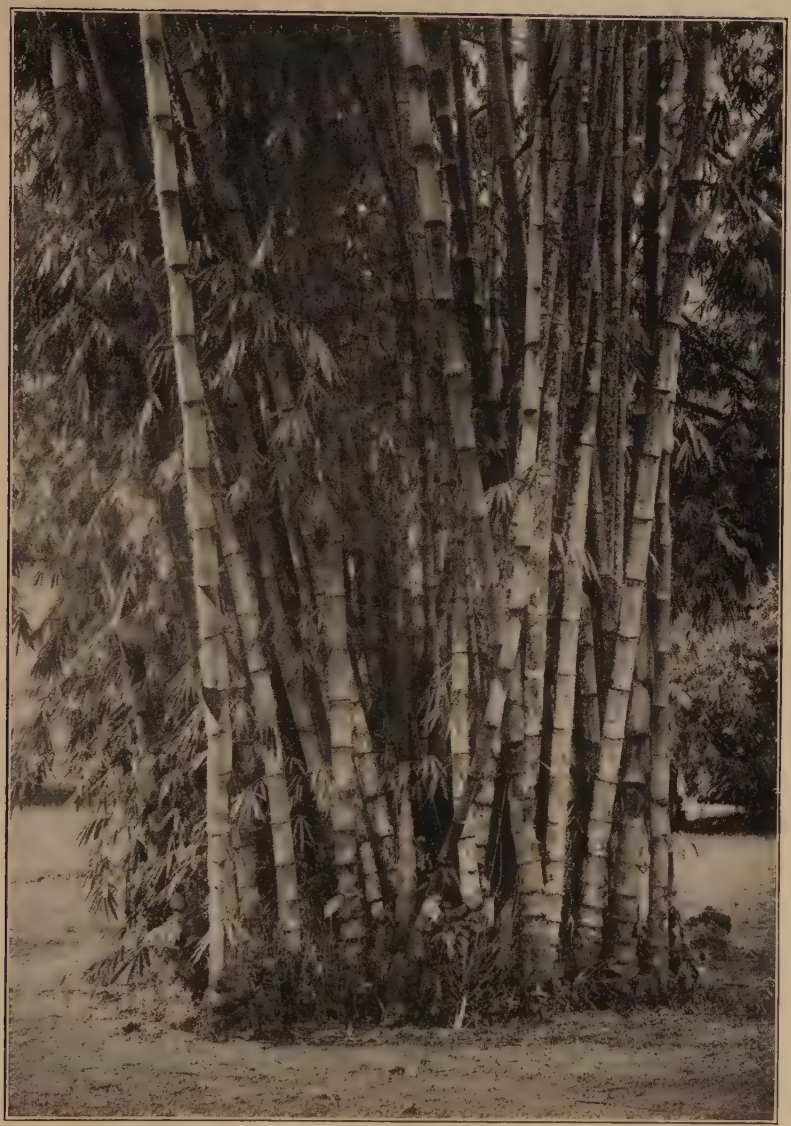
The school work is not hard and the hours are short. In

Batavia they are from 8 A. M. to 1 P. M., and as a rule teachers expect to put in about twenty-four hours per week in their classrooms.

During my stay at Bandong I was taken through the schools by a government secretary. We first went to the normal school for native teachers. It occupies a collection of Grecian buildings surrounded by large grounds. At the back there is a gymnasium and about it an acre of campus. Admission to the school is by competitive examination, the applicants coming from the schools below. In this college only boys were taken. They enter at the age of twelve or more years and graduate six years thereafter. They spend a year under the superintendence of a Dutch teacher, after which they may manage schools for themselves. The boys are paid, from the time of entrance to the college, enough to clothe them and give them spending money.

The studies include the higher branches taught in our public schools. The pupils have geography, algebra, chemistry, and physiology. They must also learn Malay and one of the Javanese dialects as well as Dutch. They are taught to draw and paint and are given, in short, what would be considered a very good education even in the United States.

I visited a number of the classrooms and heard the students recite. They do quite as well as our boys and are equally intelligent. In a geography class I asked a boy to go to the map and put his finger on New York. He did so at once. I asked him how he could get to San Francisco from that point. He replied that he would cross the United States by railroad and outlined the route with his fingers, although there was no railroad marked



It is hard to imagine how the Javanese and their neighbours would get on were it not for bamboo. They eat the young shoots, while the stalks furnish material for all parts of a house, and for many utensils and weapons besides.

In Bali, where the Hindu caste system to some extent survives, the priests belong to the highest, or Brahman class. Therefore the funeral of a priest calls for a special procession and weird rites.

At the cattle fairs held by the Dutch to stimulate interest in better breeding, the best stock shown often comes from Madura. The Madurese bathe their cows every day and treat them as well as their children.

upon the map. In response to my further questions he pointed out the Nile and located Cairo and Khartum. I found boys equally clever in every class and was told by the director that they showed fully as much intelligence as the European children.

CHAPTER XXII

CRUISING THROUGH THE SUNDA SEA

I MIGHT write for a year and not describe half the colonies the Dutch have in the East Indies. I don't know how many islands they control in this part of the world, but they must number thousands. The ocean here is peppered with their possessions. I hear of new people and new islands every day and such as I visit are more strange than the stories told about them. On my trip from Australia and New Guinea to Java my whole way was through islands. We sailed for days in sight of one little archipelago after another, now under the shadow of great volcanoes, and now almost skirting the coconut-lined shores of flat islets. Indeed, this part of the world well deserves the name of Insulinde, or "Island India," which some writers give it.

Among the more important islands is Madura, which is only half an hour's sail from Surabaya, and is administered as part of the territory of Java. There is a regular ferry service connecting the two, and the natives cross over from the island to trade. Madura is much like Java, though not so rich. It is very small, but is thickly populated, and the people are more wild and fierce than the Javanese. They are a jealous lot and duels among them are frequent. They use knives and lances in their fights and it takes several companies of Dutch soldiers to keep them in order.

I have seen some fine cattle from Madura, which is noted for its beef. The people are fond of their stock and treat their cattle quite as well as their children. They wash their cows all over every day. They keep them tied up and cut much of their feed. The natives use their cattle as driving animals and one of their great amusements is cattle racing. The animals are raced in pairs, the owner standing on a board fastened to a long pole tied to the yoke. The end of the board is just about even with the hind legs of the cattle and the driver rests his hands on the flanks of his beasts as he urges them onward, yelling all the time and now and then slapping them to make them go faster.

Most of the salt of Java comes from Madura. It is from sea water, which is evaporated in great reservoirs. The sale of this salt is a government monopoly, and brings in a revenue of about four million dollars a year. All over Java there are warehouses where merchants and private persons can buy it. The prices the merchants charge in retailing the salt are kept down by the fact that if they put them too high the people can go to the warehouses and buy it direct in lots of four pounds or more.

Coming westward from Thursday Island, just north of Australia, the first large bodies of land I saw were a part of the Timor group, or the Lesser Sunda Islands. I sailed right through this little archipelago, going between Wetter Island and the island of Timor. Timor is more than three times as big as Porto Rico, and is about equally divided between Holland and Portugal. The Dutch part of it is far better ruled and much more prosperous than the Portuguese section. Each has its capital, but that of the Portuguese—Dilli—is a miserable village of clay huts,

thatched with straw, while that of the Dutch—Kupang—is a fine little city with a population of several thousand.

About Dilli there are coffee plantations run by Chinese who squeeze the life out of the people. The natives are a mixture of Malays, Papuans, and Polynesians, most of whom are semi-savage. Some are head-hunters, and in the hills there are tribes whose chiefs sacrifice a number of slaves at every royal funeral.

In the Dutch half there is a resident governor who advises with the native chiefs at Kupang, and there are soldiers to keep the people in order. There is considerable trade, much of which is carried on by barter. One of the most valuable articles of exchange is a red bead worth so much that a single string will sell for fifty dollars.

Timor swarms with crocodiles, which are held in great reverence by the natives. The Malay will not readily kill a crocodile, for he believes the spirits of the dead are reincarnated in this reptile. He refers to him with much respect as "My Lord the Crocodile," and sometimes when a child is born makes offerings to the sacred beast, consisting of food in a little palm-leaf basket with a tiny light set up on top.

The shores of Java as well are alive with these reptiles which are a menace to the lives of bathers. At one time the government offered a bounty for the capture or killing of a crocodile. In a short while the officials were swamped with the dead animals brought in by the natives. They couldn't imagine where they were all coming from. Finally it was discovered that the natives were gathering crocodile eggs in the marshes and breeding from them. As soon as the young had grown big enough they were killed and presented for payment.

Passing Wetter Island I sailed on for several days by the islands of Ombay and Pantar to the great island of Flores. This is as long as from Philadelphia to Boston, and is about as wide as Porto Rico at its broadest part. It was once claimed by the Portuguese, but is now owned by the Dutch. We could see the volcanoes from the steamer and were told that Flores was very mountainous. It has only about 250,000 people, mostly savages. It produces nothing to speak of. The largest steamers do not call there and the chief business is done by native sailing vessels, which come in to get tortoiseshell and wax, sandalwood and cinnamon, and birds' nests to sell to the Chinese for soup.

The natives of this island are taller and more strongly built than the people of Java. They are darker than the Malays and have frizzly hair, which is wavy rather than woolly. They file their teeth to a point and wear *sarongs*. Many of them are pagans, worshipping the earth. I am told that these people do not till the soil because they consider it holy, and that they dig for water only at times of drought, when they make holes in the river beds. Along the coast there are some Mohammedans and a few Roman Catholics. There are two Dutch mission stations on the island, but, so far, not much has been accomplished by them.

Sailing on westward from Flores, we passed by more volcanic islands until we saw Sumbawa. This island is bigger than Jamaica, and has many volcanoes, active and dormant. It has one whose crater is more than seven miles wide, and so big that a whole city might be dropped into it and lost. The crater was caused by the eruption of Mount Tambora in 1815, when the whole apex of the

mountain, a mass higher and thicker than all Mount Washington, was blown up into the air. Tambora was then thirteen thousand feet high and eight thousand feet of it was sent skyward. The explosion was so great that it was heard in Sumatra, a thousand miles away, and also on the island of Ternate, nine hundred miles in the opposite direction. That was a sample of old Mother Earth's fireworks in this part of the world.

The eruption of Tambora was one of the greatest ever known. Sea captains tell me that the ocean for miles about was covered with floating timber. There was such a thick layer of ashes on the water that the ships had trouble in making their way through them, and they so filled the air that long after the explosion it was pitch dark in the daytime in Java, hundreds of miles to the westward. The accompanying whirlwinds were terrible. They tore up the largest trees by the roots. Men, horses, and cattle were lifted into the air and carried for miles. The population about the volcano was destroyed, and altogether about seventy thousand of the natives lost their lives. There was a town lying at the foot of the mountain on the edge of the sea. When the top blew off, the town sank, the sea water closed over it to the depth of eighteen feet, and there it is to this day. At present there is no evidence of fire about the volcano. It made one big blaze and then went out. The jungle has since grown over the streams of lava, and the crater is now a mass of vegetation with ragged green edges.

The island of Sumbawa is ruled by the Dutch through the native chiefs. There are two towns, each of which has about five thousand people, and about one hundred and forty thousand live in villages. The people are not

unlike our Moros. They have two sultans and many tribal chiefs. They are farmers and pony raisers. Nearly every man has his own pony on which he rides about, carrying a spear with him. He keeps this weapon by him when at work in the fields.

CHAPTER XXIII

THE RAJAH OF LOMBOK AS TAX COLLECTOR

SHORTLY after leaving Sumbawa we came to the island of Lombok, one of the most interesting of the Dutch possessions. It has been settled for thousands of years, but it has been so shut off from the rest of the world that its natives are in about the same condition as the Javanese were when the Dutch first came. Many of them are still Hindoos in religion, and they are pretty well divided into castes.

The Dutch govern Lombok just as they do Java, and the taxes are now collected by the native officials backed up by the Hollanders. According to Alfred Russel Wallace, the explorer, who spent some time in Lombok, the rajah then supreme in the country had great trouble in making the natives pay up. All taxes were collected in rice, every village giving so much, according to the number of its inhabitants. The tax was light, but the island was so thickly populated that the rajah should have had enough for himself and all his retainers. There were, however, thousands of nobles through whose hands the taxes passed, and after a time he found his revenues steadily falling off. Reports were sent in from one district that the people were sick and could not pay, from another that the crops had failed, and from others that volcanic eruptions had destroyed the lands. At the same time it was observed that the nobles were better dressed than ever,

There are in Bali remains of once splendid Brahman temples. The Balinese alone, of all the people of Netherlands India, cling to the faith of the ancient Hindu supremacy and worship the god Siva and his wife Duryga.

Native boats with loosely woven but stout sails of bamboo fibre are frequently seen in the straits of Bali, where mosquito fleets of opium smugglers keep the Dutch officials busy.

When the wife of a Brahman dies, her women friends and relatives take part in the cremation, carrying to the burning place the holy water, rice, and other things to be used in the elaborate ceremonial.

and that many of them were wearing gold and diamonds.

The rajah suspected something wrong. He looked over his receipts and found the reports showed that the population of the island had shrunk. He should have had so much rice from each man, woman, and child, and lo! there were not half as many on the island as during his father's time. He wanted to take a new census, with the hope of increasing his revenue, but he knew that if he asked his officers for it they would quickly understand that he was after their stealings and the number turned in would be in proportion to the amount of rice he had received the last year. If he had a census taken it must be without any one's realizing what he was up to.

After thinking the matter over, he at last evolved the following plan: Summoning all his chiefs, priests, and princes to his capital, he told them that he had had a vision in which the spirit of the fire mountain had directed him to ascend the volcano, where it would again appear to him in the flesh and give him a communication of great importance to the people. He said that the chiefs must go with him almost to the top, and that every village must furnish men to clear the roads and build bridges. This was done, and with great ceremony His Royal Highness made the journey, while the people waited and wondered. As they neared the summit of the mountain the rajah ordered all to halt, and he went on alone to the top of the extinct crater. After remaining there a day and a night, he came back looking very grave. He said that he had had a communication, but would not tell what it was. When he had reached his capital, he again assembled his chiefs, and told them how the great spirit had appeared to him with a face like burnished gold and had said:

"Oh, rajah, plague and sickness and fevers are coming upon all the earth, upon men, upon horses, and upon cattle, but as you and your subjects have obeyed me and come to my great mountain, I will teach you how you and all the people of Lombok may escape the plague."

The nobles were terrified, but they waited to hear the method of their salvation. After a short silence the rajah told them that the great spirit had commanded that twelve sacred *krises*, or swords, be made. To make them every village and every district must send a bundle of needles, one needle for every head in the village. Then when any grievous disease appeared in a village one of the sacred *krises* should be sent there, and if every house in that village had sent the right number of needles the pestilence would immediately cease. But if not, the *kris* would be of no avail and the people would die.

Natives and nobles believed in their rajah. Word went out to the villages and all made haste to collect the needles with the greatest accuracy, for they feared that if one were wanting the whole community would suffer. One by one the head men brought in their needles. The rajah received them with his own hands, marked the name of the village and district on each bundle, and laid them away in a camphor-wood chest. When they were all in, the rajah ordered the swords to be made from them under his own eye, and they were packed away for the time of the plague. Soon after this the collection of taxes occurred. To those villages which paid almost the full tax the rajah said nothing, but to those which paid only a half or a fourth of what they should, he gave warning to the head men, saying:

"The needles from your village are many more than

from such another village, yet your taxes are much less than theirs. There must be a mistake. Go back and see who has not paid."

They did so and the tax receipts at once increased, for according to law, the rajah could put to death those who did not pay honestly. And so the rajah became rich. He kept the *krises*, and if sickness appeared in a village he sent one to it. Then if the sickness went away, the *kris* was supposed to have routed it and the head men told the rajah of the miraculous power of the sacred weapon. If the plague did not go away every one was convinced that there must have been a mistake in the number of needles sent from that village and the people thought the fault was their own.

Close by Lombok is the island of Bali. This is the stronghold of the ancient Hindoo religion in the Dutch East Indies. The Balinese have steadily resisted all attempts to make either Christians or Mohammedans of them. Not so long ago if a daughter of one of the Brahman, or highest class, married a man of an inferior caste she was put to death and her lover was sewed up in a sack and thrown into the sea. The Dutch have forbidden the practice of *suttee*, by which widows were burned on the funeral pyres of their husbands. But when a prince or a Brahman dies, his wife's relatives still try to evade the authorities and sacrifice the poor woman according to the old custom. The people will not touch beef and buffalo meat and eat no other meat but pork.

There are remains of many old Hindoo temples on the island of Bali. The priests still have some ancient books made of the leaves of the lontar palm. The leaves were soaked in water for two weeks, then dried and folded in

half, and characters were scratched on both sides with a sharp knife. To make a book a number of leaves were bound together with a bit of fibre run through the middle of each one and fastened to two little pieces of wood on the outside to keep the whole firm. Fresh copies were made as fast as the old ones crumbled. It is said that the tales of some of the Arabian Nights were written on these lontar-leaf pages, and afterward carried back to Arabia by the Arab priests and traders.

In the high mountain districts of central Celebes are many prehistoric tombs and images of stone. Now the people are Moslems, though traces of Brahmanism and the earlier spirit worship survive.

With a skill born of patient practice with his crude knife, the native Celebean carves the sheath and handle for the weapon always carried at his side.

At several places along the Kora River in central Celebes are rattan suspension bridges more than two hundred feet long. This one has for its mainstay five large strands about an inch and a half in diameter.

CHAPTER XXIV

CELEBES AND THE MOLUCCAS

A NEW ZEALAND mining engineer in the employ of the Dutch, whom I met on my way through the archipelago, gives much interesting information about the little-known Moluccas and the island of Celebes which he has explored. These islands lie almost directly south of the Philippines, and their climate is much the same. It was at the Moluccas that the ships of Magellan called after their captain Ferdinand had been killed in the Philippines. There they loaded up with spices and thence went on around the Cape of Good Hope to Lisbon, completing the first continuous voyage round the world. The Moluccas are often called the Spice Islands.

Celebes lies to the west of the Moluccas. It is shaped like an octopus with feelers reaching out in every direction, so that its coast line is of enormous extent. The island is larger than any of the Philippines. It has more land than New England and in one part is longer than from New York to Pittsburgh.

The Dutch have owned Celebes for more than two hundred years, but parts of the island are still almost unexplored. The natives are wild or at best semi-civilized. They are divided into tribes each of which speaks a different dialect. In the north many have been Christianized. Some of the interior tribes wear breech cloths made

from the bark of a certain tree. They strip off the bark, soak it in water, and pound it out thin. It then becomes much like felt, and will withstand the rain. In the interior strange tribal customs persist, and spirit worship is common. It is bad luck for a man even to look at his mother-in-law, and should he be obliged to speak of her, he vigorously spits to wash away the ill luck likely to follow.

From Menado, the chief port of northern Celebes, over a million dollars' worth of copra is exported every year, besides tons of coffee, nutmeg, and mace. Copra is of late years more and more profitable and is to-day the principal product of hundreds of the islands of the Dutch East Indies. It is made from the coconut meat cut into pieces and dried in the sun. In this form it is shipped to Europe and other parts of the world and turned into coconut oil, soap, and butter. The wider use of bread and higher standards of living have increased the world's demand for butter to an amount beyond that which the dairy herds supply. Many of the oleomargarines and "nut butters" which are appearing in growing quantities in our markets are based on coconut oil. In fact, the demand is so strong that many of the coffee planters of northern Celebes have dug up their coffee trees and put the land into coconuts. The trees are easily grown and the returns are sure and comparatively quick. The Dutch East Indies exports more than fifty thousand tons of copra a year. The Dutch are developing also the business of extracting the oil, and from the fibrous coconut husks they make brushes and matting. It takes seven thousand coconuts to yield one ton of fibre.

As the chief money crop of these islands, copra is fast taking the place once held by spices. Since cold storage

has guaranteed us fresh meats and a variety of products from all over the globe, highly spiced dishes have gone out of fashion. Therefore, the Moluccas, or Spice Islands, which lie to the east of Celebes, just across the Molucca Passage, are not so important as they once were. This is true also of Amboina, the home of the nutmeg, and of other islands which produce cloves, pepper, and other things used for condiments. The nutmeg is grown, more or less, in nearly all parts of the Dutch East Indies. The trees are planted and cultivated. They grow best in the shade, and require somewhat the same care as our apple trees. They look just like the pear tree, and their fruit is not unlike an apricot or peach.

The nutmeg tree does not begin to bear until it is ten years old, but if it is properly cared for it may last a century. A good tree should annually produce about three pounds of nuts and one pound of mace, and at this yield the business is profitable. The fruit ripens several times a year, and the tree often bears blossoms and fruit at the same time. As the nutmegs ripen the pulp, which is about half an inch thick, breaks and shows the nut encircled by a network of mace. In preparing the fruit for the market the pulpy outside is thrown away and the nuts are dried slowly in ovens.

During the fourteenth and fifteenth centuries reports kept coming to Europe of the vast wealth the Sultans of the Moluccas were piling up through their monopoly of the trade in spices which they forced the natives to grow. To get a share of this wealth was the object of many voyages of discovery. It may have been one influence that brought about the voyage of Columbus, and it was the main incentive for the trip of Ferdinand Magellan, who

was looking for a short way to the Indies when he discovered the Strait of Magellan and finally crossed the Pacific to the Philippines. The Portuguese were the first to establish themselves in the Moluccas and they soon built up a brisk trade in spices, resorting to the cruellest oppression of the natives to increase the crop. Then the Dutch East India Company came and, with the aid of the natives who had come to hate the Portuguese, established their supremacy over the islands.

However, the Dutch proved quite as bad masters as their predecessors. They tried to restrict the spice cultivation, and laid waste the plantations of other islands, such as Banda and Amboina, forbidding the natives to replant on pain of death. Moreover, any native found selling even the smallest parcel of spices to a foreigner was executed, and if the foreigner were captured, he was put to death. The natives were forced to devote so much of their time to the spice crop that they could not grow food enough to support themselves, and many starved. These policies, together with competition, finally drove the Dutch East India Company into bankruptcy, and the Government of Holland took over its affairs and assumed control of all the islands now known as the Dutch East Indies.

The beginning of the New Guinea canoe is a great hollow log prepared with fire and crude axes, sometimes of stone. Sails are made of woven pandanus leaves.

Sometimes the New Guinea native fishes with a spear-like arrow with multiple points of split bamboo. In his woolly hair are his bone-tipped arrow and his three-pronged comb made from cassowary bones.

CHAPTER XXV

THE HOME OF BIRDS OF PARADISE

SOME of the most interesting colonial experiments of our time are taking place in New Guinea, the great island which lies just over the way from the Moluccas. New Guinea is one of the least-known parts of the world and is to-day in its pioneer stages. Upon it both British and Dutch are still establishing new settlements and they are sending out exploring expeditions to investigate its resources, for in this island there are more "white spots," or unexplored areas, than anywhere else within the tropics. The Dutch are governing their territory through the native chiefs just as they rule the rest of their East Indian possessions, and the British are managing their property on the same lines that they follow in their colonies the world over.

To-day I write especially of British New Guinea, but before I describe what is being done there I want to tell you something about the island as a whole.

New Guinea is, next to Greenland, the largest island of the globe. It exceeds Borneo by over twenty thousand square miles, and it is bigger than any country of Europe except Russia. It would make almost ten states as large as Indiana, six states the size of New York, and more than thirty-seven as big as Massachusetts. The distance from one end of it to the other is as long as from Boston

to Omaha, and at places it is as wide as from Boston to Washington.

Look at it as it lies upon the map. It is just north of Australia and right under the Equator, extending for ten degrees south of it. Its shape is that of a gigantic bird squatting on Torres Strait and the Arafura Sea, with its island-feathered tail spread out on the southern Pacific Ocean, and its ragged head looking up toward the Philippines and Asia.

What an enormous country and how little known! It is wilder than Africa, and a large part of it has never been trodden by white men. It has savages of whom we know nothing and plants and animals which are just beginning to be pictured in the scientific journals.

It is a land of high mountains and low miasmatic plains. There are mountains in Dutch New Guinea supposed to be over 17,000 feet high. They are covered with snow all the year around and have never been thoroughly explored. The Bismarck Mountains are estimated to be over three miles high, and the Owen Stanley range has one peak of more than 13,000 feet. Here also is the Fly River, which drains an enormous area and might be called the Mississippi of this vast island.

The Dutch have the western half of New Guinea, including the head and the upper part of the body of the squatting bird. The northern section of the remainder used to be Kaiser Wilhelm's Land, but is now administered by Australia under a mandate of the League of Nations as the Territory of New Guinea. The southern part is the Territory of Papua, which is also administered by Australia.

Papua is about three times as large as the state of South Carolina and has just about as many people as Denver, of

whom one thousand are Europeans. The white element consists of missionaries, planters, gold miners, a few storekeepers, and some government officials. The seat of government is Port Moresby, a little town on the southern coast, just back of an excellent harbour. Here there is a government house, the store of a famous trading company, a church, and a good-sized native village. The church is also used as a schoolroom and is attended on week days by about a hundred native children.

In Dutch New Guinea, formerly administered from the Moluccas but now handled as a separate province, Holland has a territory three times as big as Java. Vast stretches of it are absolutely unknown. It is sparsely inhabited by wild tribes, many of whom are head-hunters and cannibals, so that travel in the interior is exceedingly dangerous. The only exports are birds of paradise and dammar gum, a forest product used in making varnish.

The part of the Territory of New Guinea which was formerly Kaiser Wilhelm's Land has an area about one third that of Germany and its native population has been estimated at from 110,000 to half a million. In the coast districts there are only two people to the square mile, compared with the seven hundred and ten to the square mile in Java. Much of the progress made in this region is due to the New Guinea Company which, in the early days of German supremacy, controlled the trade of German New Guinea and had steam and sailing vessels moving from port to port.

One of the best parts of former Kaiser Wilhelm's Land is at the southeast, off Huon Gulf. Here there is a good harbour, and the country is well populated. The land is wooded along the coast, but farther back it consists of

rolling plains, which are dotted with trees and are as green as an English park.

Some of the land is irrigated by the natives, who use tubes of bamboo to carry the water from one level to another, and to distribute it over their little fields. They are born farmers, and grow yams, sweet potatoes, bananas, and of late years Indian corn. A great deal of the work is done by the women, although both women and men work on the few plantations of coffee, cotton, tobacco, and rubber. Of the seventeen thousand acres under cultivation, fourteen thousand are planted to coconuts, a crop requiring little labour.

Men who are well posted tell me that this part of New Guinea will eventually be a valuable possession. The government is very careful in leasing or selling the lands. In the Territory of Papua no land is sold outright, but long-term leases may be had at low rentals, provided the land is to have continued development. The British are determined to keep Papua for the Papuans. The government is setting out coconut groves and rubber plantations, and a regulation, strictly enforced, requires that every native shall plant a certain number of coconut or other valuable trees on his land, if it be suitable. There is no doubt that the colony will eventually be self-supporting. At present its expenditures are about $360,000 a year and its revenues about half a million. The revenues are derived mainly from customs duties, and the low figures of both expenditures and income show that the colony is still in its infancy.

There is no doubt that there is gold in New Guinea, but the mountainous parts of the country have not been touched nor prospected, and the quartz possibilities are

unknown. Most of the mining, so far, has been on some of the islands about the coast, especially on Misima in the Louisiade Archipelago at the tail of the bird. Some gold has been discovered on Woodlark Island, and quartz deposits are known to exist on the Fly River. Petroleum has been found and borings are being made by one of the big oil companies in behalf of the Australian government. Copper mines are being developed in the Port Moresby neighbourhood.

Along the coast of New Guinea and in Torres Strait one of the chief businesses is gathering and shipping *bêche de mer*, the gigantic sea worms, or slugs, which are so much prized by the Chinese, ranking with birds' nests and sharks' fins as one of the delicacies of every Celestial feast. There are companies employing hundreds of men engaged in the business. They use boats of five or six tons which they send from place to place to gather the sea slugs and prepare them for the market. The slugs are taken by divers, the best of whom come from the Louisiades and the Solomons. Some are men and some are women, the latter being paid as little as a dollar and twenty cents a month. The men divers often receive as high as five dollars a month, but on the average about two dollars and a half. The wages are often paid in tobacoo and clothing instead of in money.

The *bêche de mer* is called the cucumber of the sea because it looks so much like that vegetable as it lies in the water. It ranges in length from six inches to two feet and from the thickness of your finger to that of your wrist. The slugs are found upon the coral reefs and are picked off at low tide or obtained by diving to a depth of from twelve to eighteen feet. The fishermen collect them

in sacks and carry them to curing stations, where they are boiled, cleaned, and laid in the sun to dry. After that they are smoked for twenty-four hours. They have now shrunken a great deal and look like well-cooked frankfurter sausages. They are next bagged up and shipped to China. The best of them will sell there for several hundred dollars a ton, and the exports are valued at many thousand dollars a year.

These strange sea worms live on tiny shell animals found in great quantities in the waters of the coral rocks. Each slug has hundreds of little feelers about its mouth with which it brushes the rocks and draws the food from them into its throat. It might be better to say that each sea worm has hundreds of trunks corresponding to that of an elephant, save that they are of infinitesimal size, and that with each of them it picks up its food and puts it in its mouth.

There are different varieties of *bêche de mer*, the red and the black bringing the highest price. There are some kinds which are not worth the gathering, and of these one is known as the cotton fish. It has this name because it ejects a mass of white cottony matter whenever it is attacked. The stuff adheres like glue to anything it touches. It is so sticky that there has actually been talk of making cement from it.

Among the delicacies gathered on the New Guinea coast for the Chinese nabobs are sharks' fins. The seas are so filled with sharks that they can be caught by hundreds. Their fins are eagerly bought by the Chinese, who will pay as much as eight hundred and eighty dollars a ton, and in the reports of the Australian government I find it suggested that the industry be encouraged. The fins are

dried in the sun and then bagged for shipment. In cooking them after the Chinese fashion they are first boiled with wood ashes in several waters and then scraped and washed until perfectly clean. After this there is another boiling in spring water to take out the ash taste, and they are then stewed in a soup and served with crab meat and a little ham.

The chief animals of New Guinea are wild pigs and small marsupials, including tree kangaroos. In birds, the country is wonderfully rich. There are four hundred different species of land birds, among them many of most gorgeous plumage.

There are parrots and cockatoos of all colours, and pigeons more splendid than our peacock. I have seen New Guinea pigeons as big as our hen turkeys, and as small as the tiniest dove. The goura pigeon is the largest. Its body is of a brilliant light blue and its neck has all the colours of the opal. It has a crest, or egret, of tiny slate-blue feathers on its head, much like the curl on the top of the head of a baby. When the sun catches the crest it shines as though it were set with jewels.

There are birds here as tiny as the smallest humming bird and more beautiful than any of the varieties known in the United States. There are also cassowaries which have bodies almost as big as ostriches, but which look as though they were clad in frayed clothes-lines rather than ostrich plumes. When it is small the cassowary is sometimes caught by the native and tamed. It is scarcely a safe pet to have about, for it will swallow anything in sight from a stray spoon or a pound of nails to a pup or a kitten, and a kick from it when angry will break the skull of a ten-year-old boy.

The king of all the feathered beauties of New Guinea, however, is the bird of paradise. There are forty species, most of which are found in this big island. The birds are comparatively small, but their colourings are the most gorgeous known. Some of them are of the brightest red, with a lustre like that of the opal, and have yellow bills and velvet-like plumes encircling their necks. The feathers stand up like filagree wires. The golden bird of paradise has six long feathery tips extending from the back of its head, and the magnificent creature has a great crest or crown rising out of the middle of its back and spread like a canopy over it.

The plumes we sometimes see on the hats of Fifth Avenue and Paris beauties are often from the Great Bird of Paradise which is about the size of the common blue jay and has a bright emerald-green throat.

The male birds of four years old are the ones taken. The females are of a dusky brown, and are readily captivated by the gorgeous golden-orange plumes which spring from the shoulders of the male. These can be raised so as to overshadow the greater part of the bird's body. In the mating season the males assemble in flocks of from twelve to twenty and strut back and forth on the branches of a tree, displaying their fine feathers to the females. The plume hunter, having found a tree used for these bird "dances," hides in a tiny shelter of palm leaves set up in the lower limbs. He brings down his victims by shooting them with blunt arrows so as not to injure the plumage with blood. So absorbed are they in their courting that often the whole band of males may be stunned and captured without any of them having sense enough to take warning at the fate of the others and make their escape.

Outside many Papuan villages are look-outs built in the trees as protection against enemies. In some localities the natives live in such houses, while in others the bodies of the dead are put on platforms in the trees.

The colonial troops stationed in New Guinea are comfortably housed in sanitary barracks. The government policy is to use force as a last resort, and only in case the natives have shown fight.

The map of New Guinea has more "white spaces," marking unexplored areas, than any other tropical region. The Europeans are constantly pushing into the interior, winning the friendship of the natives with gifts of gaudy trinkets.

THE HOME OF BIRDS OF PARADISE

The trade in the plumes of the bird of paradise is largely in the hands of the Chinese, who have been at it in Geelvink Bay, off the north coast of New Guinea, for more than two centuries. Indeed, the brilliant feathers were perhaps marketed in China a thousand years before they were first seen in Europe, and were worn by the wealthy Chinese and the mandarins from the very earliest times. The Chinese buy the skins of the birds from the natives, paying them usually not in money but in beads, cloth, knives, and trash, and thus taking in a big profit.

The natives who sell the skins to the Chinese traders along the coast always cut off the wings and feet before skinning the birds, so that for a long time no perfect specimen was seen in Europe. From the tales of the Dutch voyagers there grew up the belief that the birds passed their lives in the air, being borne up by their plumes alone and resting only at intervals by hanging from the branches of tall trees by the wire-like feathers of their tails. They were also supposed to get their food "from the dews of Heaven and the nectar of flowers." From this came their name, "birds of paradise."

Paradise plumes are scarcer and scarcer on the hats of our American fashionables, for importation of these beautiful feathers is absolutely forbidden by our government, and its officials try to hunt down any that are smuggled in. Only the other day in a raid made on some New York millinery shops forty birds of paradise were found and the fine plumes worth thousands of dollars were taken away and destroyed.

CHAPTER XXVI

TATTOOED DÉBUTANTES AND WASP-WAISTED MEN

THE Dutch and the Australians have some "rare birds" to keep in order in their colonial aviary of the Pacific. The natives of New Guinea are even wilder and more savage than those of Borneo. There are thousands of them who go naked save for the breech cloths of bark worn by the men and the short petticoats of woven grass with which the women are clothed. Sometimes the women wear skirts of long leaves, frequently placing one layer upon another in the form of flounces. The leaf skirts extend from the waist almost to the knees, and, along with a necklace of shells or beads, form the entire clothing. Sometimes the skirts are made of the fibre of bark. Along the extreme northern coast there are tribes which go entirely naked except for a necklace of dog's teeth and a few bird-of-paradise feathers stuck in their hair. Others paint themselves in stripes of white, red, yellow, and black, and some scar themselves with flints and also by burning their flesh as the Japanese do with the leaves of the moxa.

In the far eastern part of the island both men and women tattoo their faces and bodies in a hideous fashion, and in some places tattooing is the prevailing and exclusive style of dress. The patterns often cover the whole body, and among certain tribes tattooing forms the coming-out suit of the maidens. Getting such a dress is

exceedingly painful, but my missionary friends tell me that the girls are anxious to be in the fashion and submit cheerfully despite the torture it entails. The girl to be tattooed lies down on the ground, while the ink is pricked under her skin in the various patterns by means of thorns dipped into the ink and driven under the skin with a little mallet. Such dressmaking is slow, but a suit once made lasts a lifetime. Among some tribes a man is not tattooed until he has a killing to his credit.

The New Guinea natives constitute the Papuan race and are a people different from the Malays, who live farther west, from the aborigines of Australia, and from the many other races of the Pacific. The Papuans are of several varieties. In colour they range from a sooty brown to a black almost as intense as that of an East African negro. The typical Papuan is quite tall, but pigmy tribes have been discovered living in the mountains of Dutch New Guinea. These people are well named Papuans, which means "woolly-haired." Their hair stands out from the head, and is often threaded through bamboo tubes or pipes, out of which it sticks like great tassels. If you put your hand down on it, it feels springy like a hair mattress.

In some parts of the island it is possible to tell by her hair or the lack of it whether a woman is single or married. The married women are all bald headed, and the sensible man does not attempt to flirt with a hairless female. A maiden wears her natural wool until the wedding, but after that she shaves off every bit of it close to the scalp and keeps it so shaved for the rest of her life. This is a serious matter. Until the foreigners came the razors were sharp flints, but now the natives use broken

glass, and there is a steady demand for soda and beer bottles which the natives break up for their tonsorial operations. With other tribes, a woman's bald head means that she has lost her husband. A widow must shave off all her hair, smear her body with black or yellow ochre, and wear mourning for a long time. Often the widow is the only well-covered woman in the community, for she adopts a long grass mantle and wears something like a great poke bonnet on her head.

The Papuans mourn for men but not for women. As soon as a man dies a great wailing is set up and the mourners cover themselves with mud. The howling continues all night, accompanied now and then by the tap, tap, tap of the tomtom. Toward dawn the corpse is taken off and buried. A path is frequently made through the jungle to the sea, so that the spirit may bathe. A little later the body may be dug up, and the bones cleaned and put away in a cave or near the former hut of the deceased. Walter Goodfellow, leader of a British ornithological expedition into Dutch New Guinea, tells how he started in to buy some skulls of departed Papuans, which were being kept in the natives' huts as family relics. The tribesmen were timid about bargaining at first, but when they caught on, they were eager to sell. Soon every house in the village had three or four skulls set out for his inspection.

Every Papuan thinks that he has another self, or soul, which may occasionally leave his body during sleep and which hovers around for a time after his death. This ghost may haunt such of his relatives as have displeased him. It is believed to have its home in the moon and to visit the earth when the moon is full. The dead are al-

In some Papuan tribes the maidens submit to the torture of getting the fashionable suits of tattooing which form their "coming out" frocks. The patterns are worked with thorns dipped in dye and hammered into the flesh.

Paris itself devises no more elaborate hair-dressing than do the Papuans, who are so vain about their woolly crops that they are constantly combing them to keep them fluffed out.

ways referred to in some roundabout way, never by name, as this might bring back their spirits.

I have photographs of Papuan houses taken in eastern New Guinea. They are generally built upon piles. A platform of poles is constructed first, a skeleton framework is built upon this, and mats of woven leaves or grass are fastened to it. The mats are arranged so that they can be raised or lowered to keep out the mosquitoes and flies, which are exceedingly troublesome. In some regions there are houses built in the trees, to which the people retreat in times of danger.

Among many of the tribes the men and women live together on the apartment-house plan. In some places there are houses five hundred feet long and sixty feet wide, containing sixty families or more. Such a house is usually divided by little partitions into pens built out to a central hall, so that going through it would be like passing between the stalls of a cow stable. In each one of these a family has its quarters. The women do their cooking inside and the smoke finds its way out through the roof as it can. These New Guinea flats are very dark. Sometimes the pointed roofs extend as much as thirty feet above the floor. The materials of the houses are usually poles and grass. First a framework of poles is made, and then the thatch of grass or banana leaves is tied on.

In others of the New Guinea tribes the men live in a kind of club house in which they sleep and eat, while the women live in huts off by themselves, a number of wives often being in one hut. They cook their husbands' food in their huts or on the ground outside and bring it to the men's house, set it on the veranda, and call to their husbands to come and eat. It means death to a woman to

enter one of these buildings which are reserved exclusively for the men. The club houses are often of great size and look like immense hay ricks. Their thatched walls meet high up in the ridge of the roof. Entrance is gained through a hole at the front and there are no windows.

Some of the Papuan men lace themselves in with rope in order to reduce the size of their waists and stomachs. They bind bark belts from two to ten inches wide tightly about their bodies, compressing themselves so that full-grown men acquire waists as small as those once fashionable for our women at home. It is said that the chief reason for this custom is that the men wish to persuade the women that they have small stomachs and are therefore light eaters. In New Guinea the women are the chief providers, and the maiden who is looking about for a husband is supposed to prize highest the man who will be most easily fed. A boy, on being asked why he laced himself so tightly, said:

"I shall have to get a wife some day, and if I have a big stomach no one will have me."

For this reason the men of these tribes seldom eat in the presence of the women, and take their meals in the club houses. The New Guinea natives do not believe in much fat. It is a disgrace to be stout, and the men dread extra adipose tissue as much as do the women of America. Indeed, the anti-fat quacks could do a thriving business in parts of New Guinea.

In their diet the people are chiefly vegetarians. They live on yams, sago, a kind of meal made from the pith of the sago palm, the taro, a sort of potato, and bananas. They are not particular, however, and when they can get them will eat kangaroos, pigs, dogs, snakes, and liz-

ards. They are fond of beetles and grubs, or larvæ, which the women dig out of the trees and cook.

In the interior salt is hard to get and explorers often use it to buy sweet potatoes and sugar-cane from the natives. Sea water carried inland in hollow bamboo is sometimes used in cooking. Salt is obtained, too, from the ashes of wood saturated with sea water. The cooking is done on heated stones, or in pots, where these can be had, or the food is wrapped up in leaves and roasted in the embers.

In former German New Guinea, strangely enough, the natives are natural beer drinkers. They make a liquor by chewing the root of the kava plant and fermenting the saliva-soaked mixture. After a while it becomes intoxicating and is then used in ceremonial feasts.

Tobacco is imported by New Guinea, in part of which it forms the chief currency among the natives. For the Dutch New Guinea trade it is put up at Rotterdam in a blue wrapper and the Papuans refuse any other kind. They both smoke it and chew it. One of their little ways is to walk up to a smoker, take the cigarette or cigar from his mouth, and walk off, puffing it with great satisfaction. If he takes a fancy to your smoke, it is not exactly safe to try to keep a native from doing this. The tobacco sold in British New Guinea is made up in sticks as long as a lead pencil and as big around as your little finger. It is evidently well soaked with licorice or glucose or some other such mixture, for it is as black as jet. Such tobacco is accepted in payment for goods at the store at Port Moresby, and four sticks of it are the average pay for a day's work. Among the natives themselves tobacco is the most common currency. So many sticks will buy a

hatchet or a knife, a set of pottery dishes, or a necklace. Land is often purchased of the tribes by giving them hatchets, handkerchiefs, and tobacoo, with a shirt or a knife sometimes thrown in.

Where the Papuans have come in contact with white men, articles of clothing are in enormous demand. Once acquired, they are never taken off, except to trade, with the result that as they change ownership they grow more and more filthy and pass on to their new wearers all sorts of disease. Because of this some of the Australian magistrates say that it should be made a criminal offense for a Papuan man to wear more than a loin cloth or a woman anything except her short and sanitary grass skirt. But the natives love anything in the form of a European garment and get themselves up in most fantastic fashion. It is a matter of court record that one criminal was condemned for his sins to be "deprived of his clothes." This was for him a severe punishment, not that he needed the garments, but because they were his chief source of pride and distinction.

The natives are fond of their children. They treat them well and are exceedingly affectionate. One of the missionaries told me that in his ten years in the island he had never seen a father strike his child and that mothers never whip their children.

A queer thing is the Papuan cradle. It is made of the fibre of the banana woven into a bag. Into this the baby is dropped and the bag is then hung to one of the poles of the roof or to a tree and the baby swung to sleep. If the mother goes out she merely unhooks the string and slings the cradle on her back, carrying her baby about as the Indian squaw does her papoose.

In all creation there is nothing so proud as a tightly laced Papuan brave, carrying his big drum and wearing his head-dress of feathers, and his numerous necklaces of seeds, shells, bones, and dog's teeth.

The men taking part in the duk-duk dance represent cassowaries and take short, hopping steps like these birds. Masks six feet high crown their heads, while their costumes are of leaves attached to a light framework.

Wearing clothes is said to make the Papuans less healthy, and some of the resident officials declare it should be a criminal offense for a native man to wear more than a loin cloth or a woman anything except a grass skirt.

On the south coast there are some tribes which do nothing but fish and others which devote themselves to farming. The farmers never fish and the fishers do not farm. These tribes live close to each other and exchange their respective products. Sharp sticks are about the only agricultural implements known. When the men work the land they stand in a row, plunge their sticks into the ground simultaneously, and thus pry up the soil. The fishermen make their own canoes and some of them gather shells and pearls.

Pottery and rope-making are other native Papuan industries. Not far from Port Moresby a certain tribe makes cooking vessels of clay. Every year the people send out a trading expedition which sails for several hundred miles along the coast and up the rivers selling pieces of pottery. The men dig the clay with pieces of stone lashed to forked sticks. The woman potter takes up a lump of clay and makes a hole big enough to get in her right hand. With this she gives the vessel a rude shape and at the same time hollows it out. Next it is smoothed off with flat sticks and the palms of the hands. After being dried in the sun several days, the pots are baked in heaps of hot ashes. When some hundreds have been manufactured the people make a raft of several long dug-out canoes lashed together to a width of about twenty-four feet. They then build a deck over the whole, and set up two masts, each of which carries a huge mat sail. The pots are put in crates and stacked on the deck, to be taken to Port Moresby or the Fly River country where they are exchanged for food supplies, chiefly sago.

In the development of the thinly populated areas of New Guinea the matter of labour supply offers some

difficulties. The whole number of natives is much less than a million, most of whom lack both interest and training for work. When the Germans controlled a part of the island they used to import labour for the plantations growing rubber, coconuts, and hemp. This is contrary to the policy of the British and Australians, who have forbidden any one to bring in workers from other countries. For labourers now in New Guinea and the rest of the territory under its administration Australia has special ordinances providing for a ten-hour work day six days a week and a minimum monthly wage of five shillings for men and four shillings for women and boys, with board, lodging, and medical attention besides. There is neither slavery nor forced labour.

Another problem the Europeans must deal with is cannibalism, especially as they penetrate farther and farther into the interior. Along the coast, where the missionaries have been most active, and where the natives have come in contact with civilization the practice has died out, but farther inland head-hunting and cannibalism are not unusual. Among some of the interior tribes, for example, before a house can be occupied or a new canoe launched it must be sprinkled with human blood, and so the people make raids on near-by communities to get it. The heads of the victims are dried in the sun, while their bodies are cut up, cooked, and eaten.

Although cannibalism is fast dying out, it is sometimes hard to get the Papuans to understand that human life has any great value and that murder is a crime. The report of a New Guinea magistrate tells how two natives of the Coast Range appeared before him charged with cutting the throats of two carriers. They admitted the crime and

explained that they had done it because the men were strangers, far away from their own village, and looked cold and hungry. They had not eaten the carriers, but thought it a kindly act simply to kill them and put them out of their misery. Another native, on trial for nearly killing his wife, could not be made to see that he had done anything especially out of the way. His explanation was that when he was in a hurry to go to school, his wife had been slow in bringing him his primer.

The missionaries have been at work in New Guinea for many years. There are now a large number of native evangelists and the people are slowly but surely growing out of their wild state and acquiring some degree of civilization. A number are Christians. The attendance of native children at the various mission schools in the British territory is compulsory if English is taught.

Sometimes the missionaries are severely criticized by the Europeans, but in one of his annual reports the Australian Administrator in New Guinea says of them:

" . . . The civilizing influence which the mere presence of a missionary has upon the native population, and the fact that all native schools in Papua are conducted by missionaries, together with the devoted assistance which the missions have given in combating the epidemics with which the territory has been visited, constitute in my opinion a sufficient answer to the contention that the missionaries have done no good. Upon broader grounds, I think not only that the missions do good, but that they are absolutely necessary to the development of backward races."

CHAPTER XXVII

BORNEO, AN OUTPOST OF CIVILIZATION

ANOTHER area which the Dutch and British are sharing between them is Borneo, the third largest island in the world. Icy Greenland comes first in size, and New Guinea, down here in these tropical seas, is second. The coast line of Borneo is about as long as from New York to San Francisco. The length of the island is as great as the distance from New York to Louisville, and its width as great as from New York to Wilmington, North Carolina. Borneo would make more than five states as big as Mississippi, or seven the size of Ohio. Parts of it are very high, especially in the north. It has mountains and plains, vast forests and great beds of coal. It has diamond mines and gold mines and oil wells. The country has not been prospected, for most of it is in the hands of savages, a large number of whom engage in the rather dangerous amusement of head-hunting, thus discouraging investigation and immigration. The extreme northern and northwestern parts of the island belong to the British. The remainder is the property of the Dutch, who have here a domain more than two hundred and twenty thousand square miles in extent. It is connected with Java by steamers running from Surabaya to Banjermassin, the chief city in the part owned by Holland, while there are regular sailings from Singapore to all parts of the island.

BORNEO, AN OUTPOST OF CIVILIZATION

So little is known of Dutch Borneo that it can be described only in general terms. Even the Dutch have hardly yet begun to master it. Their territory there is larger than any country in Europe except Russia, but they really rule only a small portion of it, governing as far as possible through natives. They have built up two great centres of travel and trade. One is at Banjermassin, on the south coast, at the mouth of the Barito River, and the other is at Pontianak, on the west coast, on the Kapuas River. The least important is the west coast section. This contains about four hundred thousand inhabitants, and has something like sixteen government stations.

South and East Borneo have a population of more than six hundred thousand, and seventeen government stations. Banjermassin contains about forty thousand people, and is one of the oldest settlements in Borneo. It lies in the heart of a country rich in gold, diamonds, and coal, and is a place of considerable trade. It is on a little branch of the Barito River and most of the houses are shacks built upon piles, for the river often overflows. The Barito itself is filled with craft of all descriptions, with bamboo rafts, and floating houses. Not far back of Banjermassin are extensive coal fields, and farther up are the ruins of temples and other Hindoo buildings.

Around on the east coast of Borneo, just about opposite the northern part of Celebes, the River Kotei empties into the Macassar Strait. The Dutch steamers call there, and one can go on up the river to the capital of the Sultan of Kotei. The first town of any size is Samarinda, which is quite a trading port, having a large number of houses built upon piles. The capital of the Sultan is at

Tangarung, still farther up, where His Majesty has a two-storied palace roofed with galvanized iron.

This structure is said to be the only two-storied building in the country, and it is lighted by electricity, put in by a firm of enterprising Americans. I think they got fifty thousand dollars for the job. Moreover, a man who claims to know said that they materially increased their first figures by suggesting to His Majesty that he have thick wires, on the ground that big wires would carry more current than small ones.

The Sultan wanted every room of his palace lighted, especially the quarters devoted to the harem. This feature of the contract necessitated many push buttons and numerous fixtures, for he then had forty wives and eighty-four children, and every wife and every baby wanted to be able to press a button.

In Java they say that His Majesty's income amounts to $25,000 a month, although he himself claims that he has not more than $1500 a month. His revenues come from duties on exports and imports. He charges 10 per cent. on everything except salt and opium, the trade in which he farms out as monopolies to the highest bidders. He has coal mines which are worked by convicts, and he sells his coal to the Dutch government. He is also a banker, lending his people money at 24 per cent. interest. Inasmuch as he has control of the courts and the police he has no trouble in collecting his dues.

The Sultan is fond of cock fighting, and keeps more than sixty fighting birds in his palace. Each cock has its oval wicker cage and is washed twice every day. Often these fighting cocks are quails. The Sultan is a great gambler, and every evening there are gaming parties in

the courtyard of the palace. He dotes on diamonds, and on state occasions wears one as big as a buckeye on a string about his neck. At such time he dresses in a governor general's uniform and wears a gold crown weighing about four pounds. European uniforms are worn by some of his soldiers, including the members of his band, who are gorgeous in the extreme.

Though the Dutch have such enormous holdings in Borneo, it is the British area which is best known and most developed. The British now own or control British North Borneo, the territory of Sarawak, and the little country of Brunei which lies between them. All of these countries are merely under British protection, being governed by companies or proprietors who make their own arrangements with the native rulers. Brunei is about half the size of Massachusetts. Once the Sultan of Sulu and the Sultan of Brunei owned this great territory together.

At one time we had at Brunei a consul named Moses, who obtained concessions from the Sultan of Brunei for the great province of North Borneo, and had our government pushed the matter it might to-day own what Bismarck lost and what the British North Borneo Company now controls. This American consul, having secured the property, organized the American Trading Company of Borneo and made a settlement on the Kimania River. His company set out plantations and imported cheap Chinese labour to work them, but for some reason or other they were not a success and the company failed. The property then went back to the Sultan and the British got it under a new lease from him and the Sultan of Sulu.

The Sultan has handed over the general administration

of Brunei to a British Resident and gets an allowance of seven thousand dollars a year for himself and half as much for each of his two chief ministers. He has a capital built upon piles in a bend in the river about fifteen miles from the sea. His city is surrounded by hills, and standing upon these you can see the houses apparently floating upon the water. Old Brunei is all water and houses. The boats anchor among the rude buildings and the market is made up of stalls, each of which is a canoe. Other canoes move about carrying the purchasers from stall to stall. The sellers are women wearing enormous hats. A new town is now growing up on the mainland.

Sarawak, which is about ten times the size of Brunei, is recognized as an independent state under the protection of Great Britain. It is ruled by the great-nephew of Sir James Brooke, who became famous the world over under the title of Rajah Brooke. The country is nearly as large as the state of New York, and has a coast line of four hundred miles. It exports gold, coal, rubber, rattans, camphor, birds' nests, sago, pepper, petroleum, and gambier. It has a number of navigable rivers, and it is indeed a valuable piece of property.

The story of how the British came into possession of this country is strange. When Sir James Brooke landed in Sarawak in his own vessel in 1839, he found it in a state of insurrection. The people were composed of many different tribes, who were fighting each other. Rajah Muda Hassin, the nominal ruler, could not keep the natives in order, and head-hunting was the principal business. Slavery was common and chaos reigned.

Sir James Brooke united his forces with those of the rajah, and in a short time was able to subdue the tribes-

Villages on piles in the rivers are not uncommon in parts of Borneo. The old section of the town of Brunei is all built in the water and canoes serve as stalls in the market.

Neither Christianity nor Mohammedanism have made many converts in Borneo and the mosque of Negara is one of the few Moslem places of worship in the whole island.

Borneo is well-watered and forests cover the interior. Besides the gathering of jungle products, such as armadillo skins, gums, and resins, North Borneo has a profitable timber trade with Hongkong.

men. After three years Muda Hassin abdicated in his favour, and Brooke became the supreme governor. He at once began to organize his administration along modern lines, at the same time paying respect to the superstitions and customs of the natives. He learned the Malay language, and tolerated the Mohammedan religion, although he introduced English missionaries. For more than a generation he governed the state in a way perfectly satisfactory to the people, and in 1888 he brought it under the protection of Great Britain. The office of rajah is hereditary in the family of the original Brooke, but Sarawak is governed like one of the crown colonies under the control of the British Empire.

The capital of Sarawak is Kuching, a good-sized town situated on the Sarawak River, about twenty miles from the sea. The place is well fortified. It has public gardens, good roads, and many comfortable homes. The English live in bungalows with all the surroundings of civilization. Among other things there are a women's club, a men's club, and a newspaper. There are Roman Catholic and Protestant missions, a reading room, a museum, and several factories. There are coal mines not far in the interior, and timber is being shipped from Sarawak to Hongkong and elsewhere. The country has now a revenue approximating $1,500,000, and its annual exports amount to more than $13,000,000. The military forces consist of seven hundred Dyaks and Malays under English officers.

From our military station on Bongao, in the Sulu Archipelago of the Philippines, it is but a step to Borneo. At Tawi Tawi one can almost hear guns which are fired at Sandakan, the capital of British North Borneo. The

distance is only forty miles and the sound carries easily over the water. There are regular ships from the Philippines to Sandakan, and such a steamer was in port while I was in Jolo. Less than a day's ride upon it would have landed me in Borneo.

A part of British North Borneo belongs to the Sultan of Sulu. As he is now under the American flag, his possessions there may be called American, although in reality they are held by the British, having been leased to the North Borneo Company. The company gets other lands through its concession from the Sultan of Brunei, and has in both leases a principality which might have belonged either to the Germans or the United States had we sooner awakened to a desire for foreign territory. I have already told of the unsuccessful venture of our Consul Moses. Perhaps if we had known then of the great oil wealth to be opened up in Borneo we would not have been so indifferent.

While I was in Jolo I met a German named Shuck, who had a big estate not far from that town. He was then the only foreigner except Uncle Sam who owned any property on the island of Jolo, and this estate was granted to his father by the Sultan. The elder Shuck was a German trader, who imported all sorts of things for the Sultan. The Sultan gave Shuck a commission to sell his North Borneo property for him, and Shuck offered it to Prince Bismarck. The Germans were not then anxious to build up a colonial empire, for they had their hands full with the Franco-Prussian war and other European questions. At any rate, Bismarck wrote Shuck that Germany did not want the property. Shuck reported this to the Sultan, and the Sultan angrily told him that he had not

managed the business as well as he should. Shuck, growing angry in turn, told His Majesty he could take it back and handle it himself, and the result was that a year or so later the Sultan leased the territory to the British North Borneo Company for $5000 a year.

For this bagatelle and a similar trifling sum paid the Sultan of Brunei, the North Borneo Company secured one of the finest pieces of property of the Far East. It has a territory about as large as South Carolina, or bigger than the island of Ceylon. It owns the tip end of North Borneo, with a coast line of more than nine hundred miles. It has a number of excellent harbours, that of Sandakan being one of the best along the Pacific. The harbour is fifteen feet deep and five miles wide, with thirteen rivers running into it. It is surrounded by hills, upon which Sandakan is built. I met a number of men in the Sulu Islands who had been over there and had a lot of information as to how the town looks and what the British North Borneo Company is doing.

Sandakan has about eight thousand people, of whom half are Chinese. There are only a few hundred Europeans, but they have all the institutions of a British colonial port in Asia. They have a club, a museum, a scientific society, and a racing association. The town boasts a fairly good hotel, a newspaper, and a large number of stores. Most of the Europeans are officers and business men.

This company's capital runs into millions of dollars and so far it has not been profitable from the standpoint of dividends. The territory, however, is growing more productive every year, and eventually it will make a fortune for its owners. The company is virtually a trust, whose business is developing a kingdom. It does not it-

self engage in trade, but it sells and leases lands and gets most of its revenues from poll taxes, duties, and licenses. In its beginning it had a revenue of less than $100,000 a year, and six years later this had risen to $417,000. At present the income is more than two million dollars, a fair proportion of which is spent in salaries. The governor gets twelve thousand dollars a year and the men under him are well paid. The police consists of a native militia of eight hundred men under European officers.

There are a large number of planters and trading companies doing business in North Borneo. There are big tobacco, coffee, and coconut estates, as well as several plantations devoted to growing hemp, pepper, and gambier, which is used in tanning leather.

The company is leasing a great deal of land on terms of 999 years, the rent coming in in the form of taxes and constituting a fund which will eventually pay big dividends. At present there are in the territory about 170,000 natives who are used to some extent as labour on the plantations.

Outside the profitable timber trade carried on regularly with Hongkong, probably the chief industry of North Borneo is the gathering of jungle products, which range from armadillo skins to the birds' nests found in great quantities in the enormous caves in the mountainous country along the east coast. This business is in the hands of Chinese traders, who arrange with the Malays to search the jungle and bring in everything salable. But the natives are filled with all sorts of ridiculous superstitions which retard their work. For example, if a certain kind of bird flies across the trail ahead of a hunting party, everyone knocks off for that day. If a snake is seen and

This girl is a belle of the Dusuns, a tribe of North Borneo. She lives in a cubicle of the one long house composing her village, and in front of her door are the human heads taken by the men of her family.

Borneo rivers are highways of trade for the boats of Chinese and Arabs who bribe the natives to gather forest products by giving them all sorts of articles brought in from the outside.

Missionarying in Borneo has its problems, as for example the native who thought it no wrong to have killed his wife because she was slow in fetching his primer when he was hurrying to go to school.

not killed, the whole gang returns to camp. Still, there are so many kinds of produce in the forests—gums, rubber, fruits, beeswax, and mangrove bark, for tanning extract—that thousands of natives get their living out of the business, and vast quantities of the produce are gathered.

CHAPTER XXVIII

THE HEAD-HUNTING DYAKS

THE ancestors of many of the Filipino peoples came from Borneo. Our Mohammedan Moros are first cousins to the Dyaks, and there are to-day thousands of Sulu Islanders living along the Borneo coast. The subjects of the Sultan of Sulu claim kinship and have many things in common with the people of North Borneo. We have tribes in Mindanao who dress like the hill tribes of Sarawak. The Caddans of Luzón have long been head-hunters, just as the Dyaks are, and but for the restraint exercised by Spain and then by the United States, the more savage inhabitants of these islands would probably be going on head-hunting excursions together.

In order to understand the uncivilized tribes of the Philippines we need to know something of their ancestors and relatives. The natives of Borneo are as savage as any people on the face of the globe. I have heard much about them down here on the edge of the Equator. The expeditions sent out from Batavia have collected a great deal of information about the Dutch parts of the island. The British possessions are to a certain extent subordinate to Singapore, where one frequently meets travellers who have come on the steamers plying between that port and Sandakan. I got some information about the Dyaks at Jolo from our military and naval officers, who had recently taken short runs to North Borneo.

THE HEAD-HUNTING DYAKS

There is no doubt that head-hunting as practised by some of the Filipinos had its origin in Borneo. The custom is common in the interior of the island where there has been little or no contact with civilization and where the Dutch and British police have not been able to penetrate. Among many of the Dyak tribes a man is not considered ready for marriage until he has killed several people and secured their heads, and men frequently cut off a head to celebrate a funeral. The warriors have regular baskets for carrying home the trophies and every house of any importance has several heads hung upon the wall. Different tribes have their own ways of cutting off human heads and curing them. In Mindanao the Moros used a knife called the *canpilan* for their private executions. It probably came from Borneo. It is a long, straight sword as sharp as a razor, with which the executioner could slice off a head at one stroke. The Dyaks have one something like it. They sever the head at the neck, being particular to keep the jaws perfect. They take out the brains through the nostrils and hang the head up in a net over the fire to smoke and dry. They understand so well how to cure heads that their trophies will last for ages, and a head once taken is considered an heirloom. It is willed to the children, who are very proud of such possessions. When a young Dyak has a fight with one of his fellows he tauntingly tells the object of his wrath that he does not amount to much, and asks how many heads his father or his grandfather took. Among some tribes it is a matter of honour to gather the heads of men only, and those taken in battle are more prized than those captured from ambush.

Others of the Borneo Dyaks are not so particular in

their head-hunting. All heads are heads that come into their baskets. They lie in wait for the Chinese working on the plantations and kill them if they can catch them alone or in small parties. They attack even women and children to butcher them, and sometimes buy slaves that they may cut off their heads. Indeed, it is said that a slave condemned to death will bring more at auction among the Dyaks, because he can be executed by the man who buys him. Some years ago there was a famine in the Sulu Islands. The people died in large numbers, and at one time about four thousand were carried to Borneo to be sold as slaves. It is said that the chief purpose of the purchasers was to add Sulu heads to the family treasures.

No one knows just how head-hunting originated. The custom has been common in Borneo for ages, but the natives can give little information about it. One legend says that there was once a Dyak maiden who scorned her lover though he brought one beautiful gift after another to lay at her feet. At last he brought her a human head. Then she laughed and said that was a gift worthy of a Dyak maid and consented to be his bride, and so head-hunting was established. It is largely connected with religious superstition. Some of the tribes say that the persons whose heads they take will become their slaves in the next world, and others that the acquisition of a fresh human head means prosperity to the family by which it was taken. On its account the soil will produce better, the game will be more plentiful, the streams will have more fish, and the women will bear more children. The Dyak women especially admire a man who has a number of heads in his collection, and among some of the cousins of our Moros a young man cannot expect to marry the daughter

The Dyak youth of more remote tribes cannot enjoy all the privileges of manhood until he has obtained a fresh human head. These ghastly trophies are so cured that they are preserved indefinitely and become family heirlooms.

In Sumatra tobacco is raised on a very large scale and thousands of acres of the young plants are often shaded during a part of the day. The leaves are dried in great bamboo sheds.

In one place in Sumatra the Dutch have established two thousand Javanese families in homes like this one. By such colonization schemes the government is trying to solve the labour problem in the outlying possessions.

of a warrior unless he has a head or two with which to adorn his hut for the coming of his bride.

In New Guinea also the young boy is not happy until he can wear the head-dress of feathers which marks him as having brought down his man. One traveller tells of an adventure with some members of the fierce tribe of the Tugeri in that island. A party of convicts from Java were working on the roads around the port of Merauke. All at once they were heard screaming and an armed guard was rushed to the spot. In the few minutes it took them to get there head-hunters had decapitated every one of the convicts and vanished. The heads had been taken off with bamboo knives more quickly than a surgeon could do the trick with the most up-to-date instrument. This Tugeri knife is merely a piece of bamboo stripped off from the stem, but it has a natural edge as keen as the finest tempered steel.

From time immemorial the Dyak women have worn corsets. They string rings of brass or lead on strips of bamboo, cane, or rattan and then wind them about their bodies from the armpits to below the thighs. A woman dressed up this way looks very much like a barrel walking about with a head and arms sticking out of the top. Sometimes the corset is smaller, consisting only of a score of rings about the waist; at others it is very heavy, the whole weighing as much as fifteen pounds. The brass rings are often highly polished, so that the girl goes around in a coat of bright mail.

The corsets frequently fit tightly and are so difficult to put off and on that they are worn a long time. When food is plentiful the owner has great trouble in removing her corset. One method of doing this is for her to hang

by her arms to the limb of a tree while her friends, having given her body a coat of oil, pull the corset up inch by inch until it is finally squeezed off over the arms. Below this corset the women usually wear skirts, but among some tribes they are almost naked.

Some of the Borneo men dress as lightly as the least civilized of the Philippine Islanders. They wear practically nothing. Others wear padded fighting jackets, while the costumes of those living along the coast of the northern part of the island are not unlike those of the Moros.

Many of the savages of Borneo have holes in the lobes of their ears as big around as a napkin ring. Women often carry cigars in their ears, and one frequently sees ear holes through which one could thrust four fingers. One Borneo traveller said he measured a woman's ear which had a hole in the lobe seven inches long. The ear is first pierced at six months of age. Only a small hole is made then, but this is increased by inserting larger and larger plugs, so that when a child is full grown it has a loop in its ear from one to four inches long. I have seen similar holes in the ears of the women of India and Burma and the latter country the women all wear ear plugs.

In Borneo both sexes chew the betel and both consider black teeth the thing. Among some tribes the teeth are filed almost to the gums and shaped in different ways. This is a favourite fashion among the Moros.

Like some of the natives of Java and like the Moros, the Dyaks blacken the teeth. They naturally become discoloured from chewing the betel, but in order to give them the hue of black varnish the people rub them with burnt coconut shell mixed with oil. They even scour off the enamel that the teeth may take the black dye better and

hold it longer. Sometimes holes are bored into the teeth and brass pegs are inserted. These are considered most ornamental, and a young dandy will endure tortures to get the holes bored and the pegs inserted in his front teeth. The filing of women's teeth is usually begun when they reach marriageable age and must be repeated every ten years in order to have the mouth preserve the most fashionable cut.

The wild men of Borneo have naturally little hair on their faces, but what they have they pull out with nippers or tweezers. Among some tribes the eyebrows are shaved and the eyelashes plucked out. Others of the savages rub quick lime into the chin to destroy the vitality of the hair follicles. At the age of fifteen the eyebrows and eyelashes are plucked out and the total absence of hair on the face is the sign of manhood or womanhood.

There is a great similarity between the homes of the Sea Dyaks and the Moros, and the hill tribes of Borneo have huts much like those of the mountain people of Mindanao. The towns along the shores of North Borneo are like those of the Sulu Islands. They are made up of huts of bamboo thatched with nipa palm and set upon piles. Many of the towns are built out over the water, the houses being reached by bamboo walks and having bamboo platforms between the huts.

Even in the interior the Dyaks build their houses in the streams or near them. They frequently have watch towers and drums to alarm the villagers at the approach of strangers. I met soldiers at Davao in the southern part of the Philippines who had found similar villages in that region. The Borneo villages are often walled with bamboo hedges.

It does not cost much to build such houses as these in Borneo, which look for all the world like strawstacks. The house walls are of bamboo, and the roof is of wide and fan-like palm leaves woven in sheets and laid on so that they overlap one another like the shingles of a house. They are waterproof and withstand even the floods of the rainy season. The walls are finished in the same way, the leaves being laid on the poles and overlapping one another like weather boarding. The floor is of split bamboo poles laid upon bamboo studding and tied there with rattan strips.

The roof is sewed together with rattan and the walls are tied on with rattan. There is not a nail in the whole structure; everything is done by sewing and tying. There are thousands of stitches in such a hut but it can be built by three men in one week. The door to the house is a hole large enough for a man to stand erect within it. It is closed by a framework of bamboo and is reached by a good-sized log with notches cut for steps.

Sometimes all the people of a whole village will live in one very long house divided into as many compartments as there are families. First, running the whole length of the house, is an open platform where the unhusked rice, fishing nets, and other things are spread out. Next this is a covered veranda some twenty feet wide. Here the women often weave cloth or make the mats used both for dinner tables and beds. The men sometimes make their boats here, if the latter are not too long. This veranda is also a public highway, and any one may pass along it from one end to the other and continue on his journey. In it each family has its own portion, in which is a fireplace, consisting of a small slab of stone. Here

the men warm themselves when they get up in the chill of early morning. Over the fireplace hangs the most prized possession of the family, its bunch of dried human heads. On one side of the veranda is a row of doors, each of which leads into the living quarters of a single family. Sometimes there are as many as half a hundred families in one long house, and the chief of the village proudly says: "I am chief of fifty doors."

The practice of slave owning is discouraged by both the Dutch and the British. As in the Sulu Islands when we acquired the Philippines, slavery is common, and in the Spanish time the Sulu Islands were slave markets for Borneo. In Borneo the slaves usually live with their masters, and have about as much consideration as the rest of the family. Slaves are acquired by war, by purchase, and through the non-payment of debts. They have fixed rights and those of the same master may marry among themselves.

I hear everywhere stories of the big game of this island. The North Borneo Company has laws which regulate the season for shooting big game, and the planters are always ready to get up a hunt for any stranger who comes properly introduced. There are elephants and rhinoceroses, wild buffaloes, wild pigs, deer, and bear as well as plenty of crocodiles. The elephants and rhinoceroses are great nuisances to the plantation owners, as they destroy the young rubber and coconut trees. The telegraph line across North Borneo is out of commission a large part of the time because the elephants rub against the posts and push them down.

The best crocodile hunting is with a dead monkey for bait. A tough stick, to the centre of which is fastened a

rattan rope, is concealed in the body of the monkey, the other end of the rope being tied to a float. The crocodile swallows the monkey, and with him the stick, which goes down easily. Once inside the crocodile, however, it turns crosswise in his gullet. The stick has sharp points, and the more the reptile tries to get rid of it the more firmly it becomes fastened in his flesh. He jerks the float this way and that, and the hunters who are watching catch hold of it and drag him to the shore, where he is decapitated with an axe.

Unless a crocodile has shown some signs of being a man-eater, the Dyaks are too superstitious to interfere with him. But as soon as a person is killed by a crocodile, the natives set to work to hunt down the murderer, and keep on watching and killing crocodiles until they are sure they have the right one. Since the Dyaks generally wear brass ornaments the evidence of the crime is discovered when the animal is killed and cut open. There are some men who make a business of killing crocodiles. These professionals are always called in to help catch a man-eater and are supposed to have some wonderful gift for handling the great reptiles.

Among other things shot are monkeys, of which there are many kinds, including the ourang-outang. The latter is often very dangerous and when angry will not hesitate to attack a man. The ourang-outang of Borneo is excelled in size only by the gorilla. It is nearly as large as a man, has arms of enormous length, and can jump from limb to limb, catching hold of the branches by its hands. It has strong teeth, with which it tears the flesh of its victims.

In many islands of the Pacific I have heard stories

of men with tails, but so far have failed to find any accounts entitled to much credence. One of the most remarkable is the statement of Carl Bock, a commissioner of the Dutch government. Bock met an officer of the Sultan of Kotei, who claimed that he personally had seen men with tails. He told where the men were to be found and described them as having white hair and white eyes. He said their tails were from three to four inches long, and that they usually cut little holes in the floors of their huts to thrust their tails through so that they might sit down in comfort. Making an arrangement to pay him two hundred dollars if he would bring him a pair of these tailed people, Bock started out with the man to find their village. But the commissioner was taken sick before he reached it, and the result is that the tribe with tails has not yet been found.

CHAPTER XXIX

ABOUT SUMATRA

SUMATRA is nearly four times as large as Java, while thirteen Hollands could be fitted into it and leave room to spare. It is longer than from New York to Chicago, and in one place as wide as from Washington to Albany. It is a land of mountains and plains. Along the west coast there are peaks from two to three miles in height, and on the east opposite Singapore there is a vast plain, much of which is under water during part of the year. This is especially true of Lampong, the province nearest Java. The word "Lampong" means "bobbing in the water." Here one can travel one hundred and fifty miles over lands almost perfectly level, and then by going thirty miles farther come to peaks reaching two miles above the sea.

The island has vast tracts still inhabited by savages and a large section which the Dutch have been trying for years to subdue. During my conversation with the Governor-General of the Dutch East Indies he referred to the wars with these natives, especially the Achinese, and pointed out the province of Achin on the map. It lies at the extreme northern part of Sumatra and is about as large as West Virginia. It contains rich pepper districts, and has also, it is said, some gold and silver. Its people are Mohammedans and use the Arabic characters in writing. They are said to be treacherous, but of late years, on

When the foreign residents of Padang go up into the highlands for health and coolness their route takes them through such scenes as this. Some of the mountains in northwestern Sumatra are more than 12,000 feet high.

The young girls of the wild tribes have naturally good teeth. But as soon as they become of marriageable age, their molars are filed down almost to the roots, and the wife wishing to keep her husband's love will repeat the process every few years.

account of the wars, few outsiders have been able to travel among them.

In Achin every man is a born soldier and every village has its army ready for service in time of war. The people have been fighting foreigners for hundreds of years. Their country was one of the first in this region to be discovered by white men. Marco Polo visited it in 1291, and about the time of the discovery of America another European landed there and wrote of its pepper, aloes, and silk. Queen Elizabeth made a treaty with its sultan, and considerable trading was done before the country came into the hands of the Dutch.

From time to time the different foreign nations tried to overcome the Achinese, who fought them one after another. At the end of five centuries they are barely quelled and their conquerors keep a sharp eye open to see that they stay quiet. As I have already said, it is estimated that the Achinese wars have cost two hundred thousand lives and $200,000,000.

Sumatra, which is one of the richest islands of the Far East, has enormous tracts of fertile soil, and produces pepper, coffee, and rice in large quantities. Some of the best of our Java coffee is grown in Sumatra and sent over to Java for export. The town of Padang near the centre of the west coast is surrounded by coffee plantations, and there are other regions in which the berry does well. It is grown in the mountainous districts by about the same methods as those used in Java.

The best tobacco lands are on the other side of the island. A great deal is raised about Deli, on the Strait of Malacca. The leaf is especially valuable for wrappers,

the best of the product going to Europe and thence to Cuba, to be used for the finest of the Havana cigars.

It is along this same coast that pepper is found. Sumatra raises more pepper than any other island of the world, and has been raising it for centuries. It was the trade in spices which brought the Dutch to the Far East, and a large part of their first pepper shipments were from Sumatra, although they got some from India. They lost the India business through the over-charges of the pepper trust. About the time of Queen Elizabeth they had settlements both in India and in these islands, and were doing most of the carrying trade of this part of the world. They then sold their pepper at seventy-five cents a pound, but trustlike, as they had the monopoly, thought they could double the price, water their stock, and still declare big dividends. The English merchants, however, objected to paying one dollar and a half a pound, and organized the famous East India Company, which drove the Dutch out of Hindustan and eventually gave India to the British.

In Sumatra the Dutch still own pepper plantations. The Sultan of Achin has his pepper farms, and in Lampong there are other pepper estates which yield well. In a good year Sumatra exports about two thirds of all the pepper that tickles the human palate.

The pepper grows upon bushes which often reach a height of from twenty to thirty feet. The plants are set out from cuttings so near together that one acre will support twenty-five hundred plants. In Sumatra, where wages are perhaps a little lower than in the Philippines, it costs less than thirty dollars to bring an acre of pepper plants into bearing, and after that it is said the pepper

from that acre will sell for four hundred dollars a year. In some regions, the plants begin to bear at three years, but in others it takes from five to eight years for them to reach full maturity, after which they will produce from ten to fifteen years longer. The pepper is in the form of berries, which are first green, then red, and when ripe they are yellow. After picking they are dried on mats in the open air. When dry they turn black.

Some of the best pepper plantations are in the land of the Battaks, a big tribe of semi-savages who live in the hills south of Achin. These people are Malays intermixed with Dyaks of Borneo and with Hindoos. They are taller than our Filipinos, darker in complexion, and more heavily haired. Many of them have beards. In the wilder portions of the country they are very savage. Those Battaks who have come in contact with the Dutch are semi-civilized, and many of them can read and write. They have preserved ancient writings on palm leaves which show that they once had more civilization than they have to-day.

Little was known of these people until after the middle of the nineteenth century. They had a bad reputation on account of the stories travellers told of their cannibalism. According to them the Battaks ate their aged relatives, not to get rid of them but from pious motives. They believed that an old man could attain some sort of immortality by becoming part of the vigorous bodies of his younger kinsmen. When the lemons were ripe the aged victim was forced to climb a tree, while the family danced below singing, "Where the fruit is ripe it falls from the tree." As the old man fell he was knocked on the head, then cut up and eaten according to custom. The

Battaks are now mostly Christians or Mohammedans, and deny these reports or say that it was long ago that such rites were practised. Others of the people believe in three deities—a creator, a preserver, and a destroyer. There is also in their faith a touch of Brahmanism. On the whole, they are mild and peaceable, hospitable, and very courteous.

Battak girls dress better than the Javanese, and their forms and features are more attractive. The young girls wear a great deal of jewellery and every maiden carries her whole dowry on her person. From her wrists to her shoulder her arms are covered with bracelets, and in her ears are buttons and hooks of silver and gold. Some girls have high back combs plated with gold, and some have *sarongs* of silk interwoven with gold threads and decorated with small coins. It is not uncommon for a woman to cover the whole upper part of her person with silver dollars beginning with a row at the neck and running in concentric rows down to the depths of a very décolleté dress. I am told that some of the women wear silver nail protectors, such as are used by the Chinese, and that many have gold belts and gold and silver buckles to fasten their *sarongs*.

Marriage is largely a case of courtship and love in many parts of Sumatra. Still, the daughters have to be bought by their husbands from the parents. This purchase is secret, but it is necessary, nevertheless, and is always insisted upon unless the girl is old and homely, and the prospective husband has little. Then he may be taken into the family of his bride with no payment whatever. In the latter case, however, the ceremony is different, and the husband's rights are also different. He becomes, in

short, the slave of his in-laws, and his wife is his legal boss. If he should get tired of his situation he may apply for a divorce, but the wife keeps the property and the children.

Indeed, in the Padang Highlands of the interior is a tribe where the women are the real rulers. This is the region of the Menangkabau, a part of the country seldom penetrated by travellers. The Menangkabau women have more property rights than the men. If a man dies his possessions go to his father and mother, but if the woman dies her property goes to the children. For this reason the men give their property to their wives, and the result is that most of the wealth of the tribe is owned by the women. The husband can divorce his wife whenever he chooses, but he must allow her to keep the property in her possession. Hence there are few divorces, and the people are said to be uncommonly moral.

The Menangkabau are generally monogamous notwithstanding their Mohammedanism. But if a man exercises his right as a Moslem to take the four wives permitted by the Koran, he remains in the family of his own mother and goes to visit each of his wives at her mother's home, staying a week at a time. Formerly all the lands were owned by the women, who thus held the purse strings. The men were entirely dependent upon them and the husband made no contribution to the family expenses.

When a girl marries a plot is assigned her from her mother's property and her husband is expected to help her cultivate it. But, as a matter of fact, the men do little or none of the farming. Rice is the chief crop and women do practically all the work on it, from sowing it in the mud to reaping and storing it in the barns. After the Dutch took possession, the Menangkabau men were per-

suaded to work. They made money, and now they are expected to bring gifts of food, clothing, or money whenever they visit their wives.

Several families will often live in one house. If a daughter gets married a new addition is built on at the back where she dwells and brings up her children. The various additions can be recognized by the prongs which extend up from the roof, and one sometimes sees half a dozen houses so joined together.

These are the famous "horned houses" of Sumatra, so called because the roofs curve up to two points like the horns of a cow. The tradition is that there was once a great war between Sumatra and Java in which so many men were killed that the rulers of the two islands declared such loss of life must be stopped. The dispute, they said, must be decided by a fight between two bullocks. The Sumatran bullock won and ever after the people were known as the Menangkabau, or "Bullock Victors." The buffalo's horns were adopted as a sign of the triumph, and their outlines now appear in the roof tree of every building, and on every bridge and wagon-top of these people.

The roofs are thickly covered with thatch, and on the homes of the wealthy the tips of the horns are capped with shining metal. The houses of the poor are walled with woven bamboo, but those of the rich are sided with wood completely covered with carving and decorated in bright colours. Every house has its rice barn, which is often even more elaborately decorated then the dwelling itself. The barns are set up on piles and the openings are near the roof and reached by ladders. A group of family houses will have a small curved-roof building with open

sides, called the *balei*, where the men of the village gather for discussion, and a community house where the unmarried men and the boys over ten years old sleep. At night the *balei* can be shut in by letting down woven bamboo screens and it is sometimes used to shelter travellers, like the government rest-houses of Java.

In Lampong even small places have their town halls, where the men, women, and children meet together and where all public business is done. About these the peddlers and marketmen collect, story tellers stand and sing out their tales, and here dances are sometimes held, lasting for several days and nights.

I have talked with the Dutch officials about the towns of Sumatra. The natives nearly everywhere live in villages and there are only a few cities of any size. Padang, the largest city, has about 90,000 people, of whom some 1700 are Europeans. The province is ruled by the Dutch and the town has many beautiful Dutch villas, similar to those of Java. Many also live in bungalows, constructed of wood and bamboo, with the floors several feet above the ground. Some of the villas are roofed with a thatch of palm leaves.

The natives live in thatched huts with curiously pointed roofs shaded by coconut trees. Padang makes one think of an immense park with these strange houses scattered through it. The town is close to the mountains and it is said to be very healthful. It is not far from coal fields, which are connected with it by rail.

Of late years Padang has grown by leaps and bounds and seems to have a great future. The riches of the interior have just begun to be developed, and its products must pass through this gateway to the world's markets. These

include, in constantly increasing quantities, coffee, copra, tobacco, gums, hides, petroleum, rubber, and other things from the rich central regions.

Not far from Padang is Bencoolen, which was once the British capital of the country. It has 12,000 people but is not prosperous. Deli is at the mouth of a river on Malacca Strait, just a little below Penang. Here live the Dutch civil and military officials, as well as many European merchants, making a very pleasant foreign colony. Deli is laid out in modern style, its streets being lighted by electricity. It has several banks, good hotels, clubs, a racing association, and many Chinese, Japanese, Indian, Malay, and Kling business houses. It is the centre of the tobacco exporting trade, and imports a great deal of rice from the Straits Settlements.

In eastern Sumatra is Palembang the second largest city of the island and the capital of the residency of that name. It has a population of about sixty thousand and does considerable export and import trade with Singapore, Siam, Batavia, and China. It has a European quarter, with the usual assortment of clubs and business houses. The people are largely Mohammedans, and it has one mosque floored with marble, with a minaret one hundred feet tall.

The Dutch have applied the same kind of government to Sumatra as to Java, but their success in controlling the people has been far greater in the latter island. The Malays of Sumatra are less civilized than the Javanese. Many of them, like the Achinese, refuse to be controlled, and there are frequent rebellions. Eastern Sumatra is still divided into a number of semi-independent states, each ruled by its own prince or chief, who may be called sultan, rajah, or datto. These rulers are supported by

A few corporations, using the most efficient methods and employing thousands of workers, have obtained dividends as high as eighty per cent. from the virgin tobacco lands of the east coast of Sumatra.

The big tobacco and rubber companies have undertaken all kinds of welfare work, from teaching football to the native labourers' children to establishing model schools and hospitals for their employees.

More than two horns on a house in the hills of Padang is a sign of additions built on as each daughter brings home a husband, though the latter is expected to live only a part of the time with his wife and her family.

the Dutch officials, and as far as possible the government is carried on through them. The Dutch have a court at Deli as well as native courts elsewhere, but most important cases are taken to Batavia to be tried and matters of note are referred to the Governor-General of the Dutch East Indies.

Lands may be leased of the princes for a certain number of years. All land contracts with Europeans are subject to the consent of the resident Dutch governor, and mining contracts have to be approved by the Governor-General. In nearly all the provinces the Dutch collect the customs duties and ordinary revenues.

Though Sumatra is so much bigger than Java she has only about one third as many people. Therefore, to develop the possibilities of her mines and fields labour must be imported. The big companies now established could have done little had they not been permitted to secure coolies from among the millions of Java and Madura. The recruiting is under strict government control and labour contracts are drawn up for the protection of the workers. Such contracts cannot run for longer than three years and in them the employer obligates himself to treat the labourer justly and humanely, to pay his wages regularly, to furnish free medical treatment, to supply plenty of pure water for drinking and bathing, and at the expiration of his contract to return him without expense to the place whence he came. The coolie binds himself to work regular hours, obey all reasonable orders, and not to leave before his contract expires. Before signing the agreement he is told again and again exactly what it means. At the end of the three years he may renew the contract, but it is usually at a higher wage

and for a shorter period. Most of the employers take such good care of their recruits that at the end of their terms from 60 to 80 per cent. of the coolies on their estates want to be re-employed. Some remain in Sumatra and establish themselves as small farmers, domestic servants, or retail storekeepers, and thus become permanent residents.

The government is now trying to settle the islands of the Outlying Possessions by means of direct colonization. In one place in Sumatra two thousand Javanese families were successfully located as colonists. Immigration is gradually increasing and in time may do away with the need for contract labour and also solve the problem of over-population which threatens Java and Madura.

The United States Rubber Company operates its large rubber estates near Medan, in Sumatra, with labour obtained under the contract system. Indeed, the whole great rubber industry is dependent on a supply of cheap labour. Until 1876 the world's rubber source was the tropical forest of the Amazon River basin. In that year, an Englishman named Wickham, having persuaded his government to back him, smuggled out of Brazil a number of seeds and plants of the Hevea rubber. These were planted in Ceylon and formed the beginning of the great plantation rubber industry of the Malay Peninsula and the Dutch East Indies. It has been found that the virgin soil of the Malay Peninsula and Sumatra is better suited to rubber growing than are the lands of Java and Ceylon, which have been so long in rice or sugar culture.

There are tons upon tons of rubber still in the forests of the Amazon, yet plantation rubber supplies more than three fourths of the world's requirements. When the

automobile increased the demand for rubber by leaps and bounds, it was seen that the wild trees could not be made to fill it, simply because white men could not live in the Amazon jungles and half the natives sent up to get out the wild rubber never came back.

On the Sumatra estates from eighty to one hundred trees are planted to the acre. The annual yield varies with the degree of moisture but averages about two and three fourths pounds per tree. In Sumatra and the Malay Peninsula the trees come into bearing about the fifth year. When the tree is ready, the tapper, armed with a knife especially adapted to the work, shaves off small areas of bark at a time. From these incisions, the sap, or *latex*, flows out into small cups. It takes about three years to encircle a tree completely and the bark renews itself. One coolie usually taps and gathers the latex from three hundred trees and the trees are tapped every day of the year.

The latex is carefully handled by the labourers so that it is brought to the factory free from the dirt which is often found in wild rubbers and which has to be extracted by an expensive process. When the latex is sufficiently coagulated by being heated, it is run through machinery and rolled into sheets, in which form it appears on the rubber markets.

Gold and silver are known to exist in Sumatra and the country has a Mount Ophir, but whether its name has anything to do with the gold of Ophir I do not know. There are gold fields about Padang which have been noted for centuries and placer mines in other parts of the island which are still in operation. There is some tin along the coast of the Malacca Strait and there are copper

mines near the Merapi volcano. So far the chief exploited mineral wealth of Sumatra is in her oil wells, of which I have written already.

Among the richest mineral regions of this part of the world are those on the islands of Banka and Billiton off the coast of Sumatra. Banka is separated from Sumatra by the Banka Strait and almost adjoining it is Billiton. Both of these islands have enormous deposits of tin, their output amounting to several million dollars annually. The Banka mines are a monopoly of the Dutch government, which works them with cheap Chinese labour. Much of the tin is alluvial. The chief town of Banka is Muntok, the seat of the Dutch government. It is a little city of four thousand and a port of call for the Dutch steamers plying between Singapore and Batavia.

CHAPTER XXX

SINGAPORE, A GATEWAY OF THE ORIENT

TO-DAY I am in Singapore, one of the great ports of the world and the business centre of this part of the Pacific. It is a gateway between Europe and the East, and the halfway station of the voyage around the world. It is a port of call for the steamers to and from India and China, and also for those from China and Japan going to Europe by the Suez Canal. Vessels of some of the Australian lines stop here and there are regular ships to Java, Borneo, Siam, and the Philippines.

Singapore lies at the tip of the Malay Peninsula, that long tongue of land stretching nearly a thousand miles southward from the capital of the King of Siam. Sumatra lies just over the way on the opposite side of the Strait of Malacca. This port is the distributing point for Malaysia. Here the big ocean liners discharge their cargoes for the Malay Peninsula and the numerous islands close by, and take on the products of these regions brought in by coast steamers and small native craft. For travellers, too, it is a place of importance and a good point to begin or to end any journeys in this part of the globe. It is only two days to Java, four to Siam, and one may take ship here for Hongkong or Manila, or go west to Calcutta.

Singapore is now about the size of Seattle, and has some ten thousand Europeans. The population is one of the most cosmopolitan on the earth. Here the pigtails of the Celestials and the turbans of the Hindoos bump against one another. To the north and east all is Mongolian, to the west and northwest everything is Indian. The vast majority of the people are Chinese, but there are also thousands of East Indians and hundreds of Japanese. There are dark-skinned Arabs and representatives of almost every tribe of Hindoostan and Burma. There are Parsees from Bombay and Siamese from Bangkok, as well as many Armenians and Jews. There are besides many Malays and a large number of Eurasians, who are half European, half Asiatic.

John Bull is the ruler over this mass of humanity and it is he who built up this metropolis of world trade. Indeed, he may be called the king pin and the pace-maker of colonial managers. I have met with John Bull in all parts of the globe, and wherever I find him he is making things go. Singapore is the centre of British authority in the Malay world. The British colonies on the Malay Peninsula are divided into the Straits Settlements, which embrace Singapore, Penang, and Malacca, and the Federated Malay States, which consist of Perak, Selangor, Negri Sembilan, and Pahang. There are, in addition, five Malay states not included in the Federation, but ruled by native sultans counselled by British advisers. The most important of these semi-independent states is Johore, which lies just across Johore Strait from the island of Singapore.

The British owe Singapore, and, in fact all their possessions on the Malay Peninsula, to Sir Stamford Raffles.

After his administration of the island of Java during the brief British occupation, Raffles was commissioned to establish a settlement at some other point to compete with the Dutch in the South Seas. He hit upon Singapore Island, which he found practically uninhabited and which he secured from the Sultan of Johore. Five years later the population had grown from one hundred and fifty to ten thousand and the tonnage of the shipping going in and out of the harbour in a year was seventy-five thousand.

One reason for the rapid growth of Raffles's city was the fact that he made it a free port. The Dutch were charging high duties on all goods brought to their islands and trade began going from them to Singapore. Raffles was much criticized by the English and the East India Company both for his selection of this spot and for his administrative policies. No one then appreciated the big things he was doing for Great Britain. They did not foresee the spread of British influence throughout the Peninsula or the enormous importance Singapore was to gain in the South Pacific. And so when Raffles returned to England in 1824 it was to face two years of worry and charges and claims from the company. He was broken in health, he had lost his first wife in Java and three children in Sumatra. On the way home his ship caught fire and all his notes, maps, books, and collections of years in the Far East were destroyed. The combination was too much for him and he died at forty-five. He was buried in England, but no one can find his grave. Still he needs no monument at home while this great, busy port of the Far East and the British power in the whole Peninsula remain to show what he did. He got no public

recognition for his services, yet he had the satisfaction of knowing that Singapore had succeeded beyond his hopes and in spite of his enemies.

The city is on the island of Singapore, which is so near the Asiatic continent that one can paddle over to it in a canoe in less than an hour, and so small that he can walk from one end to the other in a day. It contains only 140,000 acres, yet the value of its trade and the tonnage of its shipping are reckoned in hundreds of millions. It has millionaires by the score, and its banks and business houses are among the greatest of the Orient. Some of its hotels will accommodate hundreds of guests and fifty great steamship lines connect it with the north, west, and south. I am surprised at the business done down here on the edge of the Equator. Singapore has exports and imports well over half a million dollars. Its post office handles millions of pieces of mail annually. Ships from every part of the world go in and out of the harbour, and the scenes upon the streets are as lively as those of New York.

In coming here we passed wooded islands and entered into a sapphire sea surrounded by a green archipelago, at the back of which Singapore rose like a picture before us. It was afternoon and heavy black clouds hung over the palms which quivered in the hot air. The mighty steamers coming in and going out left trails of smoke behind them, and as we advanced the storm broke and a peal of thunder gave us a royal salute. Then the air cleared and we could see Singapore rising almost straight up from the water.

Long blocks of commercial houses extend along the waterfront. The city has many miles of docks and the

Products of the Malay Peninsula and neighbouring islands come in coast steamers and small native craft to the harbour of Singapore, where they are gathered up by ships from all parts of the world.

The cattle which are held sacred in India are used as the lowliest beasts of burden on the docks of Singapore and Penang, where they haul tin and rubber to be loaded into ships.

Rattan, a climbing palm, grows throughout the East Indies and Malaya. It has many uses, from weaving hats and matting to making furniture and baskets. Here the split strands are being pulled about a stake to make them round.

harbour is one of the busiest of the world. The wharves are so built that ships can steam right up to them, and scores were discharging or taking on cargo. My ship was one of the P. & O. Line, and we had to go to the upper end of the city before we came to our pier. We passed vessels going out on their way to Australia, great liners coming in from Ceylon and a Royal Dutch Packet vessel bound for Borneo, Celebes, and New Guinea.

As we moved through the harbour we could see the Chinese coolies working on the docks. Tens of millions of dollars have already been spent to improve the facilities for handling cargo, and the government is all the time laying out millions more. Singapore has the largest dry dock in the East.

Let us take a jinrikisha pulled by a bare-legged Chinaman and go to the wharves to see how the freight is managed in one of the biggest ports of the Orient. We pass rich business men riding about, and go by scores of bullock carts hauled by Indian cattle as white as snow. They have humps on their shoulders and straight horns. Here Mammon alone is supreme, and those animals, which are worshipped in the Indian temples, are used to haul bales of cottons, bundles of rattan, and bags of sugar and coffee. They are driven by half-naked black Klings with red rags around their heads and white cloth about their loins.

Get out and take a walk along the wharves and look at the ships. Here is one from Europe via the Suez Canal. Yellow-skinned Chinamen are unloading it. They are carrying off bicycles, American automobiles, cotton, and flour. Farther on is a vessel unloading iron from Belgium,

and below is one unshipping boxes of brandy and wines from France, marked Bangkok, and probably intended for the King of Siam.

There is a vessel which has oil-well machinery for the petroleum fields of Sumatra, while farther on a gang of brown East Indians are carrying out sheets of galvanized iron for roofs here in Singapore. There are also ships unloading coal. That coal came from England, and it has travelled thousands of miles, making the trip halfway around the world to this port. This is one of the great coaling places of the Far East and the British keep vast supplies here to have them ready in case of war.

The labourers are of every shade of black, yellow, and brown. There are hundreds of Chinese whose cream-coloured skins have been turned to old gold by the tropical sun. They wear little more than breech cloths around their waists, and carry great loads upon their shoulders. They load and unload the coal, and do the heaviest work of all kinds. Here is a ship taking on fuel. A platform has been built from its deck to the wharf. It has an inclined gangway with an angle of forty-five degrees; up and down its slope, like so many ants, the yellow labourers trot. They work in twos, each couple carrying a great bag of coal slung to a pole which rests on their shoulders. There are fifty thousand tons of coal in those warehouses at the back, and a ship can be loaded in a few hours.

Among the other workmen are Klings, dark people from southern India, who are as straight as pine trees. They are lean, wiry fellows, with long hair on their chests and limbs and straight black hair coiled around their

heads. They have regular features and their lips are as thin and their foreheads as high as our own. They dress in white cotton, a single sheet of which forms a whole suit. There are hundreds of their race in the city. They are noted for their thrift, and many of them are bankers, who have thousands to lend, although their every-day dress costs less than one dollar, and they sit half naked on boxes in which their money is kept.

Going on into the city we see strange characters at every turn. The streets of Singapore present a spectacular extravaganza of all tribes and costumes. There is a yellow Chinese jinrikisha man clad in short blue drawers. He is bare to the waist and his conical straw hat sits sidewise on his topknot. Next to him swaggers a brown Malay, wearing a velvet cap and red gown. We pass Mohammedans in red fezzes and long gowns, looking as though they had come from an Egyptian bazaar. We go by tall Sikhs, wearing turbans of black, yellow, and red, and Persians in white caps. Here comes a helmeted Englishman in a suit of white duck, and there is a Parsee clad like a preacher, in black, with a hat which makes me think of an inverted coal scuttle.

The women are even more interesting than the men. Some are as black as coal and the white sheets which they have wrapped around their bodies make them look blacker. Some have holes in their ears in which are great plugs of gold set with jewels. See the heavy circlets of gold on their wrists and ankles! Notice how their ears are riveted with gold, little bolts being put through them with two nuts on the ends so that each ear, from lobe to tip, is studded with gold.

There comes one now with a gold ring in her nose. This is as big around as the bottom of a tea cup, and the yellow of the precious metal looks all the brighter for the black face behind it. Turn your eyes now to the rest of the costume. Each woman wears only a skirt, fastened tightly above the hips and falling to the knees, and a cotton scarf stretched around the shoulders, over the breast, and under one arm, and tied in a knot at the side. None wears hat or bonnet, and four yards of cotton would make a dress for any one of the party. Those are the wives of Kling bankers and their husbands have bags of money.

Behind them comes a Malay woman half hiding her face for she is a Mohammedan, and still farther back totters a tiny-footed Chinese maiden with well-plastered hair and brightly rouged face. Moving in and out through the crowd are white-faced ladies from Europe, and there is a girl just arrived from the States. She is from New York and is stopping at Singapore on her way around the world.

As we look the sun drops down quickly, as it always does on the Equator, and the electric lights on the docks flash out of the darkness. We walk over to see the light plant, for we are told that it is American. It was put up by a pair of Yankees who have such plants scattered throughout the Far East. They lighted the Singapore hotels and won special fame by providing every guest with an electric fan in his room at so much per day. The dock electric plant is a fine one, but it is liable to be affected by the lizards, of which there are many on the island. The little animals crawl everywhere and an electrical engineer tells me that sometimes their bodies cause short circuits, the

The automobile tire has its beginning in the milky sap of the rubber tree, of which millions have been set out in Malaya. Singapore is the chief rubber market of the world, exporting 100,000 tons a year.

Water is the natural element of the Malayan boys who learn to swim and paddle a canoe almost as soon as they are able to walk. Both basket and turban will land perfectly dry on the other side of the stream.

Launches, fishing boats, yachts, Chinese junks, and hundreds of other small craft jam the Singapore River so tight with shipping that there is hardly a fairway to admit passage.

result being roast lizard and for a time Egyptian darkness along the waterfront.

Singapore is the capital of the Straits Settlements. Here in Government House the British governor of the colony lives like a lord. His palace is finer than the White House and he maintains a court somewhat similar to that of the Viceroy of India. On the King's birthday, he gives a great ball to which everybody who is anybody gets an invitation. Indeed it is said that every one who is not in jail at the time is invited.

The Europeans of Singapore are fond of society. They remind me of an old college friend who attended every funeral within ten miles of his home. When asked why, he said: "I always like to go to gatherings." That is the way with the people who live in steaming hot Singapore. They like gatherings, and they have clubs of all kinds to provide themselves with company. Some are for sporting, rowing, cricket, and lawn tennis, and others are devoted to art, reading, and education. There is a magnificent club house at the end of a wide stretch of lawn just next the harbour and a country club three miles inland at which dances and theatricals are frequently given. There are many picnics and outings of various kinds.

Here is the Raffles Public Library, and there is also a museum of exhibits from the Straits Settlements. There are several English newspapers, Chinese dailies, a Malay weekly, and other journals published in East Indian languages. The town is wide awake, and I regret to say in many respects wide open. Of the latter feature, however, you must come here yourself to learn.

And speaking of the wide openness of Singapore, such

conditions are to be found without much searching in every centre of the Far East. There is more truth than poetry in Kipling's lines:

> Ship me somewheres east of Suez, where the best is like the worst,
> Where there are n't no Ten Commandments an' a man can raise a thirst.

At the same time there are churches and chapels everywhere and more good people than bad. There is an American Methodist Episcopal mission here with thirty of our own citizens in charge as teachers and preachers. I have found thriving American missions in every Asiatic country I have visited; and a big Christian work, supported by our people, is going on in Burma and India.

This question of missions and the universality of human depravity reminds me of a story I have heard here illustrating the fact that one finds what he looks for. The story might be entitled "The Missionary versus the Tiger." The incident occurred on a steamer going up the Bay of Bengal. A blustering Englishman on board was boasting about his feats of hunting in Hindustan. He monopolized the conversation and told thrilling stories of his experiences with the wild beasts of the jungle, and especially of his many adventures with tigers. At one point in the conversation a quiet, refined man in black happened to remark that he also had been in India and engaged in missionary work there. Upon this the hunter blurted out with a sneer:

"A missionary in India! Why, man, I have been six months in India and I never saw a missionary!"

"Well, as to that," replied the other, "you have been

talking all day about tigers. Now I want to tell you that I have been twenty-five years in India and in all that time I have never seen a tiger."

"But perhaps you did not look for tigers," said the hunter.

"And perhaps you failed to look for missionaries," was the dominie's rejoinder.

CHAPTER XXXI

CHINESE WORKERS AND MALAY DRONES

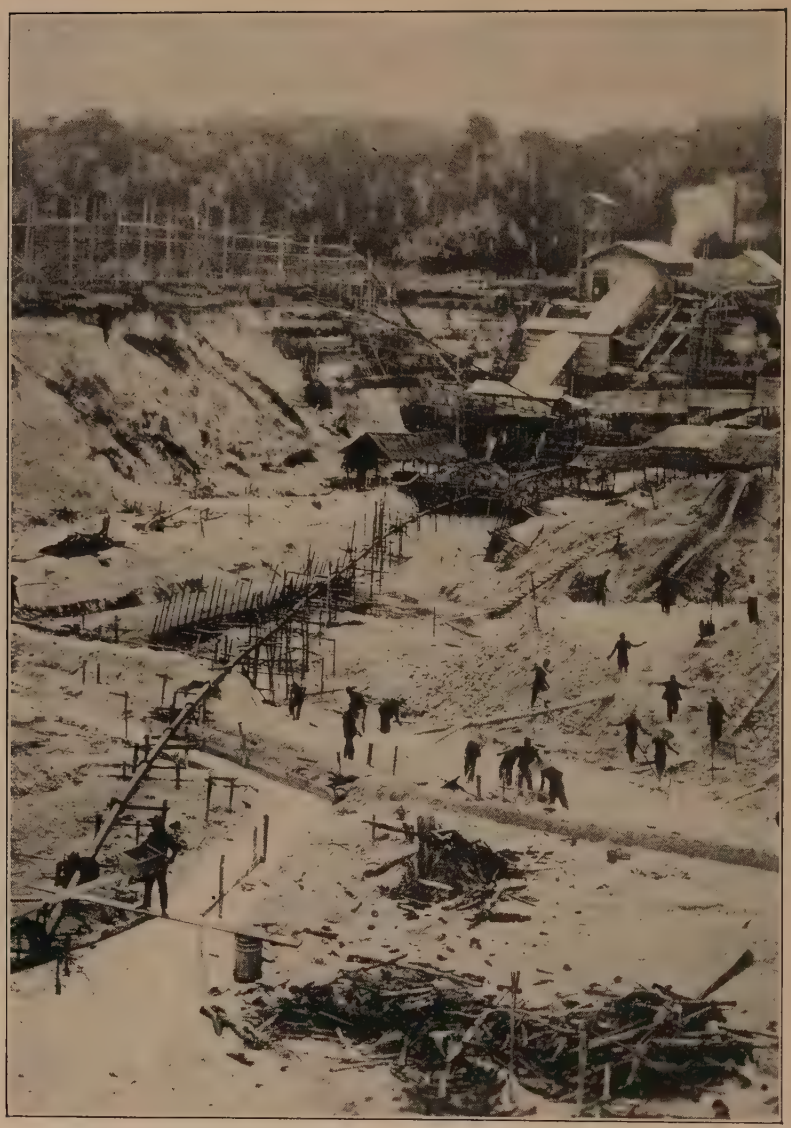
MOST of the business of the Malay Peninsula is in the hands of the Chinese. They are the shrewdest merchants and best financiers of the Far East. There are about a quarter of a million of them on the little island of Singapore alone. The English tell me that they can beat a European in almost any business deal.

As soon as the British established a stable government in the Straits Settlements the Chinese began to come in, and ever since they have been coming by the thousands every year. They are thrifty and the best of everything is rapidly going into their hands. They own stock in most of the corporations.

Since England took possession of the Federated Malay States, the Chinese have been going there, too, in great numbers. They are crowding out the Malays. There are large numbers in Burma, and something like eight hundred thousand in the Dutch East Indies. They are rapidly going into Sumatra, and nearly every settlement in Borneo has its Chinese colony.

These Chinese are far different from our laundrymen in the United States. Many are better dressed and more pompous than the nabobs of Peking. They spend money as well as make it. I see them driving about in carriages with coachmen and footmen in livery. They wear silk

Whatever one buys in Singapore, from a string of green beads to lengths of beautiful silk, usually comes from a shop run by a Chinaman. The Chinese are also generally in charge of the licensed opium and gambling places.



When you buy any food put up in a can the chances are that you are getting some tin from the Malay Peninsula or the nearby islands of Banka and Billiton. Here the ore is being washed out by hydraulic mining.

gowns and felt hats and lie back on the cushions smoking their cigars as their servants of other races drive them. Some have with them their wives, who are resplendent in diamonds and pearls and bracelets of gold. The Chinese here have their cricket clubs and some of them are yachtsmen. They are the cashiers and the accountants of this region. If you go into one of the big banks it is a Chinese who figures out the exchange and hands over your money. Some of the best stores are owned by Chinese, and in most business houses the credit of a Chinese merchant is as good as that of an Englishman. The Celestials have fine homes here. Some have large estates outside Singapore, and on the whole they are an important element of the community.

The Chinese have peculiar ways and are not the most easily governed of the Asiatics. They have secret societies, which sometimes take the law into their own hands, and in times past have worked against the government. Not long ago one of the organizations had a membership of thirty thousand in Singapore alone, while there were forty thousand members of the same society in the nearby city of Penang.

Upon the Peninsula and in the islands between here and Java, which belong to the Dutch, are the richest tin mines of the world. The tin shipped in a single year from Singapore is valued at eighty million dollars, and the greater part of this is dug out by Chinese. Some of the wealthiest Chinese of Singapore have made their millions in tin.

Much of the tin output is controlled by the Straits Trading Company, which has immense smelters on an island close to Singapore, the tin ingots being sent by steamer to

New York and Europe. We take something like thirty or forty million dollars' worth every year. We scatter it over the United States and it coats our dish pans, tin cups, and wash basins. Some of the dear girls who read this will see their fair faces shining back at them when they next scour the pie pans, and I urge them to remember that the reflection is flashed from away out here on the Strait of Malacca.

The tin is largely from alluvial deposits. The dirt is washed out by hydraulic pumps and the ore is also won in ruder ways by the poorer Chinese. The Celestials hunt for mines with crooked sticks as we seek spots for well-digging. The hunter holds the two ends of the stick firmly, and when he reaches a tin deposit the stick is supposed to bend in his hand and point downward. The tin is usually found about twenty-five feet below the surface, and the strata containing it may be from a few inches to many feet in thickness. The tin grains are mixed with ordinary sand and with all sorts of gravel, varying in size from pebbles to boulders. They lie on a bed-rock of limestone, slate, or clay and are taken out and washed. Such mining is done by the Chinese on shares. When the mines are deep they use ladders to go up and down, carrying the ore out in baskets on their backs. They stack it up in heaps near the mines and then wash it out in coffin-shaped troughs through which water runs. When it has been cleaned, it is smelted in charcoal furnaces, the best ore yielding about 70 per cent. of pure tin. After smelting the tin is run off into bricks of about the size of a loaf of bread. It then looks like silver and is ready for shipment.

There are hordes of poor Chinese as well as the rich ones.

They manage the boats in the harbour. I pay a Chinaman a few cents a ride as he takes me from place to place in his jinrikisha, and it is a Chinese who cooks the food I have at the hotel.

Then there are the coolies on the plantations. The Malays do not like to work and have never been patient enough farmers to improve the soil of their peninsula, which is not fertile like Java. The best cultivation has been by the Chinese who have thus made a great contribution to the building up of Malaya. The labourers come in as coolies under bond to work for a specified term of years. On landing they are turned over to Chinese contractors who place them on plantations in the interior. When the coolie has served his time, provided he has not fallen a prey to a tiger or been killed by a cobra, he drifts off to Singapore, where he finds plenty to do and in many cases grows rich.

After the Chinese the next shrewdest business men down here are the East Indians. When I landed it was a Hindoo who forced himself upon me as a guide. He spoke English as well as I do, and insisted so hard that I needed him that I had to take him. He goes with me everywhere and I believe he gets a commission on everything I buy.

There are a large number of Klings engaged in banking and money changing. They likewise come from Hindustan, and are the thriftiest usurers of the Far East. They lend money to the Malays and other natives and consider one per cent. a month a low rate.

Among the bankers are the Parsees who represent large houses at Bombay, Calcutta, and elsewhere. There are also Arabian traders, and quite a number of merchants

from Ceylon. Some of the finest looking East Indians are the Sikhs, who are on the police force and in the garrisons. They are very tall, straight brown men, who wear turbans and dress in an Indian military uniform which makes them quite imposing.

The Chinese and East Indians are the workers; and the native Malays are the drones. They are letting the Chinese get the better of them in numbers, in enterprise, and in wealth. Indeed, I doubt whether any civilization will make the full-blooded Malay an industrious man. You will find few steady workers among them. These people do not believe in laying up money where moth and rust will corrupt. They want only enough to support life, to dress in good style, and to give feasts when their children get married. Their needs are few, and when these are supplied they lay off until want comes again. Some of the native rulers tell me they cannōt get their own subjects to work their plantations.

As this peninsula is the home of the Malays, I am in perhaps the best place in the world for the study of the race. They are supposed to have come to the peninsula from Sumatra, and they owned Singapore when the British came into possession of the island. They should be the richest of all the people in the Eastern Archipelago, whereas they are the poorest. The profits of the change of ownership have gone to the Chinese and East Indians, and the Malays seem content that they should hold them.

At the Strait of Malacca the Malays have been contaminated by foreigners. The Europeans have taught them to drink and through the Chinese they have become opium smokers. They are even less capable than the people of the wilds. They are naturally lazy and have

become the loafers of this part of the world. Some of them act as servants for the rich Chinese or Europeans. Others do light work about the towns, and a few live in villages scattered over the islands, labouring only enough to keep soul and body together. Now and then one meets a rich Malay from the mainland, the son of an official or perhaps of a sultan, but as a rule the Malays of the Straits are shiftless and poor and they grow worse off every year.

The hotel where I am staying in Singapore recently lost two of its Chinese waiters. Among the applicants for their places were two young Malays. They offered to do the work for the same as the Chinese, but said they could not come earlier than eight o'clock in the morning, that they should need from eleven until one for their noonday sleep, and would want to close the day's work at about seven o'clock in the evening. They were of course dismissed without further question.

The Malays look much like our Filipinos. They are perhaps a little taller and better looking, but they have the same mulatto complexion and the same straight figures and independent stride. Their hands and feet are small. They are very proud and haughty and are quick to resent an injury. They remember an insult a long time and often revenge one after years of waiting.

The Malays here are Mohammedans, following the Koran and worshipping in mosques. They believe in polygamy and the richer of them have a number of wives. They do not, however, keep their women in seclusion, like the Turks, although I now and then see a woman going about with her face half hidden. Most of them are too poor to have separate apartments in their huts for the women, and harem life is confined to the rich.

The men dress in the bag-like *sarong*, above which is a jacket falling to the hips. Under the *sarong*, which reaches to the calf, the Malay may wear calico drawers, or if poor he may be naked. The rich wear pantaloons of bright colours or white duck, but the *sarong* is always worn. It seems to be the badge of the race, as are also the handkerchief turban and sandals or slippers.

The girls are especially fine looking. They have light brown skins, long black hair, and beautiful eyes. Their noses are inclined to be flat, but where they are not betel chewers, their teeth are like pearls and they have high foreheads and good faces. Many have small waists, small hands, and small feet with square toes.

They are sometimes married at fourteen, but the more common age is from seventeen to twenty. The parents arrange the marriages, and weddings are long, tedious, and expensive. Wedding presents are usually in money, and every guest must give what he can.

Divorce is quite as easy in Malaya as in other Mohammedan lands, but the Malay woman has the right of her own volition to free herself from her husband. She need wait only one hundred days before she may marry again. The married women are to a certain extent independent. Many of them assist their husbands, and in some states salaried offices are given to the native ladies connected with the court.

I have visited a number of the Malay villages. Their houses are scattered about under the trees near the roads. They are usually huts about fifteen feet square, made of bamboos or boards and a thatch of palm leaves. The average house has only one or two rooms, the people eating and sleeping where the cooking is done. The kitchen fur-

niture is an iron pan and a coconut ladle, with perhaps a pot for soups and stews. The bed is a mat spread on the floor, and the family sprawl there at full length while resting. The people of the interior live not unlike the poorer classes of our Philippine Islands, and their customs are much the same. Nearly every one chews the betel nut, and men, women, and children smoke cigarettes and cigars. I have seen girls of five and six with cigarettes in their mouths, and the babies are taught to smoke by the time they are able to crawl.

Chewing the betel is supposed to take away hunger and fatigue. I don't know about that, but I do know the habit is most disfiguring. Besides darkening the teeth, it swells the tongue and puffs out the lips and makes them crack.

Sir Frank Swettenham claimed that the gambling habit is ineradicable among both Malays and Chinese, and that it would take one policeman to every Chinese to stop it. He says the Malay rulers object to having public gambling forbidden, and that they refuse to give up the revenues which come from it. According to law, gambling is now licensed only in places and buildings approved by the police, and that within certain hours. It is provided that it must be for ready money and in halls open to all. The men who own the gambling houses aid in the suppression of lotteries.

Opium selling goes on quite openly and is licensed by the government. It may be questionable whether such things are creditable to a Christian administration. They seem a blot on the British rule, which is otherwise almost beyond criticism. Still, with such a large Chinese population and thousands of Malays who have grown depend-

ent on the drug, its absolute prohibition would, it is contended, be out of the question.

The Malay Peninsula is the home of the tiger, which in the past has taken a heavy toll in the lives of the natives. Even to-day one hears occasionally of how men and women are the victims. At one time the statistics showed that an average of three hundred people were annually killed on Singapore Island by tigers. On one of my visits to the Peninsula I was shown the tracks of a tiger in the mud near a saw mill past which we drove. The tiger had been about the mill the preceding night, but had gone away without eating up any of the Malay babies in the village near it and without playing with the quiet buzz saw. The government offers a substantial reward for a full-grown tiger and a smaller sum for a tiger kitten.

The word "Singapore" comes from the Malay and means "Lion City." It should be called "Tiger City," for in the past the island upon which it stands has been the lair of these beasts. For a long time people wondered how tigers got from the mainland of the Peninsula to Singapore Island. The mystery was solved when a tiger was found struggling in some fishing nets spread in the Strait between. The beasts evidently followed the scent of human beings and swam across.

Though one seldom hears of tigers about Singapore nowadays, they are said to be quite plentiful in the less cultivated sections of the Peninsula. As I sat in the Singapore Club the other evening an English official told me how a man-eating tiger had recently slaughtered a Malay, his wife, and five children, leaving only the sixth, a small boy who related the story. Sitting in their thatched hut one night, the family were petrified with

"My five feet eight inches seem tall, when I stand beside a Malay. These people are much like our Filipinos, brown and straight, with an independent stride. They are proud and haughty and quick to resent an injury."

Good hardwood timber is found in abundance in the forests of the Peninsula. Coolies, almost like oxen under the yoke, pull the cut logs on the crude carts.

On the Memorial Day of the Chinese their cemeteries are thronged with white-clad mourners. The tombs are decorated with bands of multi-coloured paper or silk and three red candles are burned at each one.

fright when they looked up and saw a tiger coming down on them through the roof. As they huddled together just under him the tiger sprang on them, brained the father with one blow of his paw, and then proceeded to kill all the rest of them, except this boy. He lay in a bunk against the wall and high up from the floor and thus escaped. He watched the tiger until all his family had been killed except his baby sister. With her the beast played as a cat plays with a mouse. As soon as the child would start to creep away the animal would claw it back to him. At length the little girl died of fright and exhaustion. Having eaten his fill, the tiger walked out of the hut, leaving the boy undisturbed.

The government also offers a reward for poisonous snakes, in which parts of British Malaya abound. The other day I saw a man bring in a bagful to collect his fees from the officials at Singapore. He had thirty-nine, every one of them venomous. He pulled the snakes out of the bag with his bare hands and cracked their heads against the stones as he showed them to the policemen, and I wondered that he was not bitten. There are forty-four kinds of snakes on this little island, which is not half as big as some Texas farms, and of these fourteen are poisonous. The worst, perhaps, is the cobra. The Malays tell me there is no cure for its bite. When attacked it erects the body and dilates the skin on each side of the head so that it seems to have put on a hood. At the same time it makes a noise like an angry cat.

It is the cobra that the jugglers all over the Far East use to show their skill. They handle it with impunity, laying it on the ground and playing upon a flute, which seems to hypnotize it. They also wrap cobras around their

bare necks, and fondle them. I have heard of a traveller who was watching one of these Hindoo jugglers. He made a bet that the cobra's poison glands had been extracted, and offered to prove this by handling the snake himself. He grabbed hold of it and it sank its fangs into his arm. He died within a few hours.

A cobra was recently found here in a bathroom where a little baby was playing. It did not offer to injure the child, and seemed inclined to play with it, and it was only when the other people came in that it elevated its head, swelled out its hood, and made ready to strike.

This is also the home of the python and other great snakes of many kinds, some of which are to be found in the water. One twenty-five feet long and eighteen inches in circumference was recently caught on the deck of a steamer lying at the wharf. It had probably come in with the cargo or had climbed up the chains from the water. The pythons are not poisonous, and out in the country the natives train them as rat catchers. In my voyage to Singapore the captain showed me a great snake swimming in the water some distance away from our vessel. He ran for his rifle, but before he could shoot, the monster had dived under the water and we saw it no more.

CHAPTER XXXII

JOHN BULL IN MALAYA

AWAY down here at the south end of Asia the invasion of western civilization has been going on for some years. It began in Singapore and Penang, the two chief cities in the Straits Settlements, belonging to England. Founded more than a generation before the birth of Chicago, they were for a long time trade outposts only. They are now going forward at twentieth-century speed and the whole Malay Peninsula is moving with them.

That region, which, beginning with Burma and Siam, extends southward to Singapore, was until comparatively late years given over to jungle. Then the British took hold, consolidated the tribes, and organized the Malay States under their protection. Since then roads have been cut through the jungles, and the Peninsula has thousands of miles of highway better than those of the Philippines, and equal to the best roads of Java. You can ride for days in an automobile through the Straits Settlements and the Malay States and not have enough bumps to stir up your liver. Less than a generation ago there was not a mile of railroad in the Malay States. To-day all the chief centres are connected by rail with the ports. Instead of the barbarous rule of the Malay sultans, the people now have the British to administer justice. Crime is decreasing; there are courts of all kinds,

and a first-class police force. The government has established schools and hospitals, and it is developing all sorts of industries. In Perak, irrigation works have been dug and rubber plantations are growing in the several states. Two hundred trees are planted to the acre, and there are already millions bearing. The tin and gold deposits are being exploited, and the output is now worth more than $70,000,000 a year. The Malay Peninsula is supplying half the world's tin and three fourths of its plantation rubber. What was forty years ago the home of ruthless pirates is to-day one of the chief supply grounds for international commerce.

At Kuala Kangsar in Perak the British started the first school for native Malays patterned after the English model. It is attended by increasing numbers of sons of the richer and more influential Malays from all over the Peninsula. The boys are admitted at seven and may graduate at seventeen. Already these young fellows, educated according to the best Western standards modified to meet the local conditions, are taking positions in the government service and proving a strong factor in the progress of Malaya.

John Bull's hospitals and medical corps are doing a fine work in stamping out dysentery and other tropical diseases. The ignorance and superstition of the natives make this a hard fight. The Malay will not voluntarily go to a hospital until he is about ready to give his last gasp. The result is that soon after he is admitted to the wards he is likely to die, giving rise to the belief in the minds of his friends that he has been poisoned by the doctors. The Malays have a horror of surgery, which they call "cutting pieces out of one."

In the wilds of Malaya the big game hunter may find plenty of good sport. In tiger hunting live goats are tied up for bait, but even then the beasts are hard to get.

Elephants do not have to be coaxed to take a bath, for no animals so delight in water. They are good swimmers and can breathe while under water by keeping their trunks above the surface, like submarine periscopes.

Once the haunt of Malay pirates, Penang is now a commercial city with Singapore. The British still pay $10,000 a year to the descendants of the sultan who first gave them the use of the island.

The first thing that strikes the visitor to a government hospital in Malaya is the high, closely woven wire fence surrounding it. This is not to keep the patients in but to preserve them from harm. Before this precaution many a case of dysentery was lost because food was smuggled in to the patient. Instead of beds with springs and mattresses, the hospital beds are plain boards, rows and rows of them, each with its red blanket and wooden pillow. Only Europeans sleep on soft mattresses in this hot part of the world. The native lies on a mat on a raised platform or simply on the floor with a wooden rest under his head. In the backyard of the hospital is a great tank where the bed boards are occasionally soaked in a disinfectant bath to kill any germs, and also to exterminate the vermin the patients often bring with them.

The British understand how to govern the Asiatics better than we do, although I doubt whether they are as great a success in this respect as the Dutch. I have described how Holland controls the Javanese through the natives. Here the Europeans rule through their own people. The Straits Settlements is a crown colony under a governor, appointed by the king, aided by an executive council. The Governor is practically supreme. He gets a big salary and has besides a good allowance for entertainment. He has a yacht of his own and a military guard.

The Governor rules the colony through his council, or cabinet. He has about as many cabinet ministers as our President, and there is in addition a legislative council. One of the officials of the latter is a Chinese, who represents his people in the making and execution of the laws. Some members of the council come from the other colonies of the Peninsula, for the Governor ad-

ministers not only Singapore, but Penang and Malacca. He is also High Commissioner for the Federated Malay States and for Brunei in Borneo, as well as British Agent for Sarawak and North Borneo. He is Commander-in-chief of the garrison, and as such has control of all things military.

The British treat their soldiers well while in foreign countries. The garrison at Singapore is comparatively small, but the annual military expenses for the Straits Settlements alone are nearly two million dollars. I visited the barracks and officers' quarters. They are outside the city on the hills, surrounded by beautiful grounds. The officers have pleasant homes—bungalows with heavy thatched roofs—and the barracks are exceedingly comfortable.

The Malay Peninsula produces great quantities of cocoanuts, and the British have also laid out plantations of pepper, sugar, tapioca, sago, and rubber. The enormous demand for rubber for automobile tires bids fair to enrich this part of the world for all time. The jungle is fast disappearing before the millions of rubber trees and plants.

Capital has poured into Singapore for rubber investments. Scores of plantations have been set out, and there are to-day something like two million acres in rubber trees in British Malaya. Some of the companies have paid dividends of as high as three hundred per cent., while 50 per cent. is by no means uncommon. Rubber prices are subject to fluctuations, but it usually sells for about a dollar a pound, though it sometimes goes as low as twenty-two cents. The plants used are those which produce the Para rubber, the trees coming into bearing at their fifth or sixth year. They are then tapped,

and if carefully bled will continue to produce for many years. In a single year more than one hundred thousand tons of rubber are shipped from Singapore and Penang. Singapore is the world's greatest rubber market.

There are pepper estates in Malaya and in Sumatra across the Strait. In fact, this country was first desired by England on account of pepper. Plantations were acquired by some London commissioners, who demanded that more and more pepper be sent. They knew so little about how it grows that they asked their agents to see that the natives planted more white pepper in the future, as their customers preferred that to black. Now everyone who knows anything about it knows that the white and black varieties come from the same bushes and that white pepper is merely black pepper well ripened.

Soon after that letter came, the amount of silver belonging to the company in the Singapore office was short, and in writing about it to London the agent, presuming on the ignorance of the people there, said that the deficiency was due to the ravages of the white ants. With their next shipment the London commissioners sent a basket of files, and when the agent wrote asking what they were for, the reply was that they were to file off the teeth of those ants.

The exporters say that there is still money in pepper, but the profits of the rubber industry surpass those of all other crops.

A large number of Europeans have engaged in coffee raising on the Malay Peninsula, particularly in the state of Selangor. Most of the planters are setting out rubber trees in addition to their coffee, and some are planting coconuts. They use Hindoo coolies as labourers and are

said to be making money. There are other plantations in Johore, Padang, and the Negri Sembilan.

There is a great deal of sago produced in this part of the world. It comes from one of the palm trees which grows in the jungle and which is also set out in plantations. The sago is made from the pith, which is very thick and porous. The trees are cut down in the woods and the trunks split open from one end to the other, so that the pith can be scooped out. After this it is carried to the factory and run through graters that reduce it to pulp. The pulp is allowed to stand in water for some hours and the fibre leaves the sago and goes into the water. After this the water is changed until finally nothing is left but the sago. It is now in the form of a starch, which is dried in the sun. After drying it is broken up and ground into the sago flour of our markets.

The natives have their cruder methods of getting the sago flour, which they make into cakes. Since a few days' work will supply a man with enough food for his family for six months, it is hard to get men to work in regions where the sago palm flourishes.

Tapioca, which is also raised here, comes from the root of the tapioca plant. It is handled in much the same way as sago. The plants are cultivated and it requires about eighteen months to grow the crop. After gathering, the roots are cut into pieces, ground up, and boiled to get out the tapioca. Much of the product goes to the United States.

CHAPTER XXXIII

THE SULTAN OF JOHORE

ONE of the great native plantation owners down here is the Sultan of Johore, who lives in a gorgeous palace and has an income of half a million, yet is only a puppet, after all, for John Bull pulls the strings. On my first trip around the world I had an interview with the Sultan of that day at his palace in the town of Johore, which can now be reached from Singapore by rail in less than an hour.

In the midst of a beautiful terraced lawn of many acres sloping down to the waters of the Strait of Johore is the palace. It is approached by winding drives, and away to the right shine the blue and yellow buildings of the city, which that Sultan built for his capital, and which he laid out in the original jungle. The palace is a great gray-and-white, two-story building, with wide porticoes and many big windows looking out upon the water. It is, perhaps, two hundred feet long and at least half that depth. Soldiers, in a costume half European, keep guard in front of it, and others in turbans march up and down through its various corridors.

On the occasion of my visit some of these soldiers were olive-brown Malays, others were as black as ebony. The officer who received my letters and took them to the Sultan was dressed in European clothes with a Malay *sarong* under his coat.

After I had waited a moment the Sultan himself appeared. He was a tall, fine-looking, broad-shouldered, light yellow man with gray hair, black eyes, and gray moustache. He wore white duck with a lavender skirt reaching to his knees, and bracelets of solid gold rope as thick as your finger around each of his wrists. There were diamond rings on his fingers and he had a seal-brown plush turban on his head. He spoke English perfectly, shook hands with me cordially, and gave me a seat in an American rocking chair in his audience chamber, while he took another for himself at my side. He talked of the decadence of the Malay people and said that the Chinese made much better workers. He needed the latter for development of his plantations he said, and he was glad to have them as immigrants. He spoke of his travels and told me he lacked only a visit to America to complete his tour of the world. He had visited China and Japan, and he had been to England where he was so well entertained that he was always glad to give Europeans a welcome when they came to his kingdom. While in England he had gone one day to Liverpool to see a lady off for America.

"I went down to the ship," said he, "and put my friend on board. It was only seven days to New York and had I remained I might have seen the United States. I am very sorry I did not do so, for I think yours is a great country and the Americans are a wonderful people. They gave us the telegraph and the electric light, and they are at the front in invention. I like them and I have many friends in America."

Of course, His Majesty did not speak of it to me, but I remembered it was on one of his visits to England that the monarch was sued for breach of promise. The court

judged that a foreign sovereign could not be made to pay damages for disappointing the lady in question. I did not see why he should have contested the suit so strongly, since, being a Moslem, divorce would have been an easy matter for him.

The conversation turned to Johore and His Majesty told me it was he who had introduced coffee into Singapore and that he was anxious to see his own kingdom become one vast plantation.

"We have a coffee," said he, "that will grow here and many foreigners are buying estates. I believe in getting all you can off the top of the ground, rather than digging up the mineral wealth that lies under it."

After an hour's chat His Majesty said that he had an engagement to go in his yacht about forty miles up one of his rivers to show some foreigners a coffee plantation and he gave me a cordial invitation to go with him. Upon my asking to be excused he said he was sorry he could not postpone the appointment, but invited me to take tiffin with him at the palace, and to accept the use of his carriage in my journeys about.

Another of the lesser lights with which the Governor has to deal is the "King" of the Cocos-Keeling Islands, which are treated as part of the settlement of Singapore. I met their king the other day. He is mixed British and Javanese, and speaks our language with a cockney accent. He is a little six-by-nine potentate. Indeed, you would hardly call him a king at all, for he is only a big planter. As I chatted with him on the steamer I asked him what his business was, and he told me he owned the Cocos Islands and all they contained.

I asked the owner of the Cocos Islands where and what

his property was. He told me that it lay just about seven hundred miles southwest of Sumatra and twelve hundred miles from Singapore. It consists of twenty small coral islands which have been planted in coconuts. It has now hundreds of thousands of coconut trees yielding millions of coconuts every year. The owner told me how he managed his islands, the receipts from which gave him a princely income. The coconuts are gathered when they fall and the meat is taken out and dried in the sun. It is then barrelled up and sent away by the shipload. It requires about six hundred men to do the work, and these and their families constitute the population. The king lives all alone with his family and the natives on these islands. His nearest shopping place is Batavia, which he visits in a little schooner every three months or so. If the wind is right the trip is one of seven days. If he strikes a calm, he may be a month on the way.

Though the Cocos-Keelings enjoy the protection of the British flag, they have been under the control of one family for more than a century. About the time that Captain John Smith was struggling with his colony in Virginia, the islands were discovered by Captain William Keeling on a voyage from Batavia to the Cape of Good Hope. Two centuries later an English adventurer named Hare settled on the southernmost island with a number of slaves. Two or three years after this a Scotchman named Ross came with his family and some Malays and took up his abode on Direction Island. This little colony was soon strengthened by Hare's runaway slaves and after a while the British flag was raised over the whole group of islands. Ever since then Ross or his descendants have enjoyed whatever of profit or glory their possessions afforded.

In the lands of the bamboo, where nature has provided ready-made containers, there is no need to buy water pails or pipes. Among the more backward tribes, whole fields are sometimes watered from these bamboo tubes.

Coconuts dried in the sun of Malaya are now competing with the world's dairy herds, for the "nut butters" on American tables are the product of oil obtained from copra. It is also used in soap-making.

Mr. Ross says there is no money in the islands except the parchment notes he issues in denominations of a quarter, half, and one, two, and five rupees, the rupee being equal to about twenty-five cents of our money. As the natives cannot read, the quarter rupee has the four corners cut, the half rupee two corners, and the one rupee one corner. Checks representing days of work are also issued to labourers, and these are exchangeable for goods at the stores.

THE END

BIBLIOGRAPHY

GENERAL

THE Dutch have exhaustively investigated the conditions and resources of Netherlands India and publish every year a number of official reports, issued from The Hague and from Batavia. A selected list of these publications will be found in the "Statesmen's Year Book." There is an English edition of the "Yearbook of the Netherlands East Indies," issued by the Department of Agriculture, Industry and Commerce at Buitenzorg, Java, containing general and statistical information regarding these colonies, particularly Java. The most important of these, too, are listed in the "Statesmen's Year Book." Besides these official documents, there are a great many non-official books on the places and people described in this volume. Among them are:

BEMMELEN, J. F. VAN and HOOYER, G. B. "Guide through Netherlands India." London, 1906.

BEZEMER, T. J. "Door Nederlandsch Oost-Indie." Groningen, 1905.

BROWN, J. M. "The Dutch East." London, 1914.

CABATON, A. "Java, Sumatra, and the Other Lands of the Dutch East Indies." London, 1911.

CARPENTIER-ALTING, J. H. "Grondslagen der rechtsbedeeling in Nederlandsch-Indie." The Hague, 1913.

COLYN, H. "Nederlandsch-Indie, Land en Volk." Amsterdam, 1910.

LABBERTON, D. VAN H. "Handboek van Insulinde." Amsterdam, 1910.

PAULUS, DR. "Encyclopaedie van Nederlandsch-Indie." The Hague, 1917.

BIBLIOGRAPHY

TORCHIANA, H. A. van C. "Tropical Holland." Chicago, 1922.
WALCOTT, A. S. "Java and Her Neighbours." London, 1914.
WALLACE, ALFRED RUSSEL. "The Malay Archipelago"—10th ed. New York, 1898.

JAVA

CAMPBELL, DONALD M. "Java: Past and Present." 2 vols. London, 1915.
CHAILLEY-BERT, J. "Java et ses Habitants." Paris, 1900.
DAY, C. "Policy and Administration of the Dutch in Java." London, 1904.
MCMILLAN, M. "A Journey to Java." London, 1915.
OFFICIAL TOURIST BUREAU. "Come to Java" Annual. Weltevreden.
SCIDMORE, E. R. "Java, the Garden of the East." New York, 1897.
WIT, AUGUSTA DE. "Java: Facts and Fancies." Philadelphia, 1906.

NEW GUINEA

ALDER, W. F. "The Isle of Vanishing Men." New York, 1922.
BEAVER, W. N. "Unexplored New Guinea." London, 1919.
GRIMSHAW, BEATRICE. "The New New Guinea." London, 1911.
HESSE-WARTEGG, E. VON. "Samoa, Bismarckarchipel und Neu Guinea." Leipzig, 1902.
KRIEGER, MAX and others. "New Guinea." 6 vols. Berlin, 1899.
LYNG, J. S. "Our New Possessions" (German New Guinea). Melbourne, 1918.
MEEK, A. S. "A Naturalist in Cannibal Land." London, 1913.
MONCKTON, C. A. W. "Some Experiences of a New Guinea Resident Magistrate." London, 1921.
—— ——"Last Days in New Guinea." London, 1922.
MURRAY, J. H. P. "Papua, or British New Guinea." London, 1912.
NEUHAUSS, R. "Deutsch New Guinea." 3 vols. Berlin, 1911.
NEWTON, HENRY. "In Far New Guinea." London, 1914.
PRATT, A. E. "Two Years Among New Guinea Cannibals." London, 1906.
RAWLINGS, C. G. "The Land of the New Guinea Pygmies." London, 1913.
SELIGMANN, C. G. "Melanesians of British New Guinea." New York, 1910.
WOLLASTON, A. F. R. "Pygmies and Papuans." New York, 1912.

BIBLIOGRAPHY

BORNEO

Beccari, O. "Wanderings in the Great Forests of Borneo." London, 1904.

Cator, D. "Everyday Life Among the Head-Hunters." London, 1905.

Gomes, E. H. "Seventeen Years Among the Sea Dyaks of Borneo." Philadelphia, 1911.

Guillemard, F. H. H. and Keane, A. H. "Australasia." Vol. 2, New ed. London, 1908.

Haddon, A. C. "Head-Hunters, Black, White, and Brown." Cambridge, 1902.

Hose, C. "The Pagan Tribes of Borneo." London, 1912.

Ireland, A. "The Far Eastern Tropics." London, 1905.

Lumholtz, C. "Through Central Borneo." 2 vols. New York, 1920.

Nieuwenhuis, A. W. "Quer durch Borneo," 2 parts. Leyden, 1904-07.

Ranee of Sarawak. "My Life in Borneo." London, 1913.

Roth, H. Ling. "The Natives of Sarawak and British North Borneo." 2 vols. London, 1896.

St. John, Sir S. "Rajah Brooke." London, 1899.

Shelford, R. W. C. "A Naturalist in Borneo." London, 1917.

SUMATRA

Bernard, F. "A Travers Sumatra." Paris, 1910.

Hurgronje, C. S. "The Achenese." Leyden, 1906.

Maas, A. "Quer durch Sumatra." Berlin, 1904.

MALAY PENINSULA

Belfield, H. C. "Handbook of the Federated Malay States." 3rd ed. London, 1907.

Boulger, D. C. "Life of Sir Stamford Raffles." London, 1899.

Cerruti, G. B. "My Friends the Savages." Cano, 1908.

Clifford, H. "In Court and Kampong! Native Life in Malaya." London, 1903.

Harrison, C. W. "Illustrated Guide to the Federated Malay States." London, 1920.

—— ——"The Magic of Malaya." London, 1916.

Maxwell, George. "In Malay Forests." Edinburgh, 1906.

"Oxford Survey of the British Empire." Vol. 2. London, 1914.

SKEAT, W. W. "Malay Magic" (Folklore and Religion). London, 1900.

SWETTENHAM, F. A. "British Malaya." New York, 1907.

WRIGHT, A. and REID, T. H. "The Malay Peninsula." London, 1912.

INDEX

INDEX

Achin, province of, Sumatra, 222
Achin, Sultan of, pepper plantations of, 224
Achinese, wars with the, in Sumatra, 46, 222
Amboina, home of the nutmeg, 181
Amusements of the Javanese, 92
Ants, a destructive pest in Java, 159
Arabs, in Java, 52
Army of Netherlands India, the, 41
Bali, island of, stronghold of ancient Hindoo religion, 177
Bandong, a health resort, 48; centre of quinine producing region, 62
Banjermassin, trade centre of Dutch Borneo, 203
Banka, Island Sumatra, rich mineral region, 234
Batavia, chief port of Java, 1; a modern city, 6; its early history, 7
Batik cloth, its use and manufacture, 99
Batok Volcano, visit to, 144
Battaks, semi-savage tribe in Sumatra, 225
Bazaars, at Djokjakarta, 94
Bêche de mer, gathering of, a chief industry of New Guinea, 187
Bencoolen, once English capital of Sumatra, 230
Birds' nests, edible, gathering for market, 121
Bismarck, refuses chance for acquiring North Borneo, 208
Bismarck Mountains, in New Guinea, 184
Borneo, development of, 4; outpost of civilization, 202
Boro Budur, the shrine of a thousand Buddhas, 104
Botanical gardens at Buitenzorg, 29, 31
British North Borneo Company acquires concession from Sultan of Sulu, 209
British rule in Malaya, 257
Bromo, active volcano, 136, 139, 145
Brooke, Rajah, gains control of Sarawak, 206
Brunei, American concessions in, 205, 208
Brunei, Sultan of, 205
Buddha, Boro Budur, vast monument to, 104; statue of Mendoet, 109
Buitenzorg, "country capital" of Java, 18; wonderful botanical gardens of, 29
Cannibalism in New Guinea, 200
Cassowaries, in New Guinea, 189
Celebes, island of, 4, 179
Chandi Sewu, ruins of, 113
Chinese, in Java, 52; the business men of the Malay Peninsula, 246
Cinchona plantations of Java and Sumatra, 59
Cobras, prevalent in the Malay Peninsula, 255
Cocos-Keeling islands, interview with the "king" of, 265
Coffee, cultivation of, 128; history of, 129; reduced production due to blight and insect pests, 135; culture in Sumatra, 223; production of, in the Malay Peninsula, 261
Copper, mining of, in Sumatra, 234
Copra, use of, and extent of production, 180
Corsets, of the Dyak women, 215
Cotton goods, demand for, in Java, 150
Daendals, Marshal, Governor-General of Netherlands India under Napoleon, 7
Dammar gum, exported from Dutch New Guinea, 185
Deli, modern city of Sumatra, 230
Dilli, Portuguese town in Timor Island, 169
Djokjakarta, initiation of a prince at, 81; exploring the city, 88; seat of the

oldest empire in Java, 92; bazaars of, 94
Djokjakarta, Sultan of, under the Sultan of Solo, 120; his salary from the Dutch, 121
Dutch, rule of the, in the East Indies, 18
Dutch East Indies, importance of, 3; political system of, 18
Dutch East India Company, failure of, 26; seize control in Java, 119; bad policies of, 182
Dutch New Guinea, an almost unknown territory, 185
Dyaks, head hunters of Borneo, 212
East Indians, shrewd business men in the Malay Peninsula, 249
Education, in Java, 164
Filipinos, Dutch opinion of American treatment of, 67
Flores, island of, 171
Fly River, the Mississippi of New Guinea, 184
Food, as served in Batavia, 14
Foreign service, training for, by the Dutch, 23
Fruits, native of, Java, 127
Galunggung, Mount, eruption of, 138
Game, hunting, in Borneo, 219
Gede, volcano of, 136
Gold, possibilities of, in New Guinea, 186
Gold, in Sumatra, 233
Goura pigeon, from New Guinea, 189
Governor-General of the Dutch East Indies, audience with, 18
Head hunters, of Borneo, 212
Holland, success of colonial enterprizes, 3, 4
"Horned" houses of Sumatra aborigines, 228
Horse racing at Bandong, 56
Hospitality, in Java, 160
Hospitals, established by British in the Malay Peninsula, 258
Hotel des Indes, largest hotel in Dutch East Indies, 13
Indigo, production of, 154
Irrigation, in Java, 70, 76
Java, the most populous large island, 3; size and extent of development, 5; customs of the people, 11; political system, 18; homage paid to Europeans by natives, 21, 22, 36; the best governed colony in the world, 26; how at first it paid its way, 26; and the deficit now, 28; abundance of wild game, 34; botanical wonders, 34; a good market for American manufactures, 150; few opportunities for Americans, 157
Javanese, customs of the, 11
Johore, an important Malay state, 236
Johore, Sultan of, an interview with, 263
Jugglers, Indian, as snake charmers, 255
Kaiser Wilhelm's Land, now administered by Australia, 184, 185
Kapok, a growing export, 159
King's Plain, the, in Batavia, 8
Klings, in the banking business in the Malay Peninsula, 249
Kotei, Sultan of, vagaries of, 204
Kuala Kangsar, British establish school for native Malays at, 258
Kuching, capital of Sarawak, 207
Kupang, Dutch city in Island of Timor, 170
Labour conditions in Sumatra, 231
Lampong, province of, Sumatra, 222
Land system, of Java, 68
Lombok, interesting island of, 174
Mace, production of, 181
Madura, important island near Java, 169
Malacca, of the Straits Settlements, 236
Malay, the, a poor workman, 249, 250; customs of, 251
Market customs of Djokjakarta, 94
Marriage customs, in Java, 77; in Sumatra, 226
Menado, chief port of northern Celebes, 180
Menangkaban, women ruled tribe of Sumatra, 227
Merapi, volcano of, 138
Missionaries, American, in Singapore, 244
Mohammedanism in Java, 54, 86
Molucca Islands, or Spice Islands, 179
Moses, United States Consul, obtains concessions in Borneo, 205, 208
Muntok, chief town of Banka Island, Sumatra, 234
Negri Sembilan, one of the Federated Malay States, 236
Netherlands East Indies, importance of, 3; population and extent, 18

New Guinea, extent of, 4; development of, by British and Dutch, 183; chief animals and birds of, 189; the aborigines of, 193
New Guinea Company, responsible for development of the German territory, 185
Newspapers of Java, 164
Nutmegs, production of, 181
Oil industry of Java, extent of, 155
Opium, use of, in Java, 79
Opium trade, a government monopoly, 28; in the Malay Peninsula, 253
Padang, largest city of Sumatra, 229
Pahang, one of the Federated Malay States, 236
Palembang, second city of Sumatra, 230
Papandayang, volcano of, 137
Papua, Territory of, 184
Papuans, the natives of New Guinea, 193
Paradise, birds of, exported from Dutch New Guinea, 185; the trade in the plumes, 191
Parsees, in the banking business in the Malay Peninsula, 249
Pawnbroking, a government monopoly, 28, 29
Penang, of the Straits Settlements, 236
Pepper, production of, in Sumatra, 224; in the Malay Peninsula, 261
Perak, one of the Federated Malay States, 236
Petroleum, production of, in Java, 155; in New Guinea, 187
Pontianak, trade centre of Dutch Borneo, 203
Pottery making, an industry of the Papuans, 199
Prambanan, ruins of, 113
Pythons, indigenous to the Malay Peninsula, 256
Quinine, production of in Java and Sumatra, 59; in South America, 60; history of, 60; details of manufacture, 64
Raffles, Sir Stamford, excavations of, in Java, 108; the father of Singapore, 236
Railway lines of Java, 70; conditions of travel, 72
Rice, principal food crop of Java, 53; cultivation and harvesting, 76
Roads of Java best in the tropics, 57
Royal Dutch Company, in control of Petroleum production, 155
Rubber, great possibilities in Sumatra for production of, 232
Rubber plantations, in the Malay Peninsula, 258, 260
Sago, production of, in the Malay Peninsula, 262
Salak, volcano of, 136
Salt, monopoly of, in Madura, 169
Samarang, experiment station at, to assist in production of sugar, 153
Samarinda, trading port in Dutch Borneo, 203
Sand Sea, the, one of the world's wonders, 139; visit to, 142
Sandakan, British town in North Borneo, 209
Sarawak, under protection of Great Britain, 206
Selangor, one of the Federated Malay States, 236
Sharks' fins, production of, on the New Guinea Coast, 188
Shell Trading and Export Company, chief rival of the Standard Oil Co., 155
Shuck, Herr, offers Bismarck control of North Borneo, 208
Si Jagver, ancient cannon at Batavia, 7
Siksh, in the military in the Malay Peninsula, 250
Sinagar tea plantation, largest in the world, 31
Singapore, gateway of the Orient, 235
Slavery, in Borneo, 219
Smeru, highest volcano of Java, 142
Snakes, prevalent in the Malay Peninsula, 255
Social customs, in Java, 162
Soldiery of Netherlands India, 41
Solo, Sultan of, ruler of a native state in Java, 54, 116, 121
Straits Settlements, of what composed, 236
Straits Trading Company, tin smelters operated by, 247
Sugar, extent of production in Java, 152
Sumatra, the country and its people, 222
Sumbawa, island of, 171, 172
Surabaya, principal seaport of Java, 148

Surakarta, largest native city in Java, 116
Swettenham, Sir Frank, on gambling among the Malays and Chinese, 253
Tailed men of Borneo, stories of, 220
Tambora, Mount, eruption of the greatest ever known, 171
Tangarung, capital city of the Sultan of Kotei, 204
Tangkuban Prahu, volcano of, 138
Tattooing among the natives of New Guinea, 192
Tea, importance of the industry in Java, 31; different varieties, of, 34; cultivation, 35; curing and preparing for market, 37; Japanese methods compared, 38; production in China, 39
Teak, forests of, in Java, 66
Teeth filing, the custom of, 85, 102, 216
Telega Bodas, volcanic lake, 137
Tengger Volcano, visit to the, 139
Tenggris, natives of the volcano slopes, 140
Tigers, prevalent in the Malay Peninsula, 254
Timor, island of, 169
Tin, mining of, in Sumatra, 234; richest mines in the world on the Malay Peninsula, 247, 258
Tjimahi, garrison of the Dutch colonial army, 41
Tobacco, demand for, in New Guinea, 197; production of, in Sumatra, 223
Torres Strait, comparative size of, 4
Tosari, in wildest section of Java, 136; starting point for volcano visits, 139
Umbrellas, as indicating rank of possessor, 90
Van den Bosch, Governor, able rule of, in Java, 26
Volcanoes, more in Java than any other part of the world, 136
Wallace, Alfred Russel, quoted on Lombok Island tax difficulties, 174
Weltevreden, modern Batavia, 7, 11
Women, condition of, in Java, 101; the real rulers among the Menangkabau, in Sumatra, 227